



**A METHOD  
OF ASSESSING PROGRESS  
OF  
AGRICULTURAL  
UNIVERSITIES  
IN INDIA**

Dr.M.H.M.G.N.H. Library

378 IND



5947

**INDIAN COUNCIL OF AGRICULTURAL RESEARCH**

5947  
378.





Dr.M.H.M.G.N.H. Library

378 IND



5947



Government of Karnataka

**Dr. M. H. Marigowda National Horticulture Library**

Directorate Of Horticulture Lalbagh,  
Bangalore - 560 004

ACC. No.

5947

CALL No.

378





A METHOD OF ASSESSING PROGRESS  
OF  
AGRICULTURAL UNIVERSITIES IN INDIA

PART I  
JOINT INDO-AMERICAN STUDY TEAM REPORT



INDIAN COUNCIL OF AGRICULTURAL RESEARCH, NEW DELHI

APRIL 1970

630.711

1 CAR



# Contents

	<i>Page</i>
<b>Preface</b>	v
<b>Introduction</b>	1
<b>CHAPTER 1</b>	
<b>The Institution Building Framework</b>	3
Elements in institution building—The Institution building universe—Institution building concepts and the agricultural university.	
<b>CHAPTER 2</b>	
<b>The Agricultural University—Essential Features</b>	8
Goals and objectives—The essential components—University administration—University development plan—Colleges—Departments—Tenure and promotions policy—Resident instruction—Research programme—Extension programme—Library—The spirit and doctrine	
<b>CHAPTER 3</b>	
<b>Assessment Methods and Procedures</b>	37
Information and sources—Analysis and interpretation of information—Report preparation—The assessment team and supporting services—Method, uses and limitations.	
<b>Appendix</b>	51
Department Head questionnaire—Department general assessment—College Dean questionnaire—Reserach questionnaire—Extension education questionnaire—Library questionnaire—Faculty member questionnaire—Student questionnaire.	





## Preface

This is a report of a Joint Study Team set up by the Government of India in consultation with the United States Agency for International Development and the Indian Council of Agricultural Research with the following terms of reference:

“The First Joint Indo-American Team made recommendations which led to the establishment of Agricultural Universities in India. The Second Joint Indo-American Team recommended that there should be strict adherence to basic principles of the Agricultural Universities. The Education Commission recognized that the most distinctive feature of the Agricultural University is the integrated programme of research, training and extension and recommended that these Universities should, in addition, have the following features:

- (i) Their concern with all aspects of increasing, disseminating and applying knowledge related to agriculture including basic and applied research;
- (ii) Their primary emphasis on teaching and research directly and immediately related to the solution of the social and economic problems of the countryside;
- (iii) Their readiness to develop and teach the wide range of applied science and technologies needed to build up the rural economy;
- (iv) Their readiness, not only to teach undergraduates, post-graduates and research students, but also to give specialized technical training to young people who are not candidates for degrees; and
- (v) Their emphasis on adult and continuing education side by side with teaching regularly enrolled students.

“The first Agricultural University was established in 1960 and the second in 1962. A stage has been reached when it is necessary to develop suitable criteria and methodology for measuring the progress made in developing an Agricultural University and achieving the aims and objectives envisaged by the Education Commission. For carrying out such study, the Punjab Agricultural University is considered appropriate and convenient.

“The Government of India have decided to set up a study team in consultation with the U.S.A.I.D. and I.C.A.R. for undertaking the study and completing it within a period of three months.”



The report on the work of the Study Team is in two parts. The first, *A Method of Assessing Progress of Agricultural Universities in India*, is a recommended method for judging the progress and effectiveness of an agricultural university. The method was developed and tested at the Punjab Agricultural University and improved upon on the basis of the experience gained. In the view of the Study Team, the method is an effective one; however, its use at additional agricultural universities would no doubt lead to further improvements and refinements. Such use is encouraged and recommended.

The second report, *The Punjab Agricultural University, An Assessment of Progress to 1970*, illustrates the use of the method and procedures detailed in the first named report and reports on the progress of the Punjab Agricultural University. Recommendations for the future are set forth for the consideration of university leaders. The effectiveness of this report must be judged on the basis of its usefulness to the P.A.U. and the applicable information it may contain for other agricultural universities with common goals and aspirations.

The two reports are presented as companion reports, each to stand independently but many, particularly those interested in the method and procedures, will want to use the two reports together.

Agricultural universities are complex institutions with responsibilities for teaching, research, and extension education, and with linkages to the society to be served. No two universities are identical. Similar rates of growth and achievement are not to be expected in view of (a) the different starting points of the universities, (b) limitations imposed by Acts as regards the responsibilities, area of operation, and authority vested in the University, (c) varying socio-economic conditions of the rural people whom the university is expected to serve, (d) varying financial and political support to the university by the Government, and (e) varying capabilities. The progress of an agricultural university is the result of an interaction between its leaders, teachers, students, farmers, administrators and politicians. It is difficult to make inter-institutional comparisons of rates of progress for teaching, research and extension activities. It is obviously not feasible to add up rates of progress for different items. The yardsticks suggested by the Study Team are to be used more appropriately for watching the comparative progress of a particular university over a period of time rather than for comparing the achievements of various universities.

The assessment method and procedures are designed to be used by an external assessment team; however, the institution-building concepts and the methods and procedures should be useful in internal assessment by the officers and academic leaders of a university. It is hoped that the data sheets and proforma evolved will prove useful for accreditation and will be adopted by the agricultural universities in India with modifications as



needed at the particular university. Along with the data, the importance of the institution-building concepts and the need for collective judgements cannot be over-emphasized. It is also to be stressed that the methods are designed for an in-depth study of a university, the kind of critical analysis that hopefully university leadership is making on a continuing basis. This type of study requires that the assessment team spends sufficient time at the university and in studying the service rendered to the society to be served, to be able to make meaningful judgements regarding the intangibles that are so important in the development of agricultural university.

The members of the Joint Study Team wish to place on record the appreciation of the full co-operation given by the Punjab Agricultural University and in particular the Vice-Chancellor, Dr M.S. Randhawa, the Registrar and Comptroller, the Estate Officer, Librarian, Deputy Director Students Welfare, Deans, Directors and Heads of Departments. The Joint Study Team's task was greatly facilitated by the ready assistance of the Chief of Party and his staff, Ohio State University, and U.S.A.I.D. The 154 faculty members and 276 students who responded to questionnaires provided information and ideas that were crucial to the success of the assessment of progress. Professor S. S. Johl and Assistant Professor Gurminder Singh, Department of Economics and Sociology, were particularly helpful in supplying data on the agricultural economy of Punjab.

Representatives of a number of off-campus organizations provided an outside perspective of P.A.U, Punjab Departments of Agriculture and Animal Husbandry, Indian Council of Agricultural Research, Indian Agricultural Research Institute, Indian Veterinary Research Institute, Rockefeller Foundation, and representatives of the P.A.U. Board of Management. The ideas and hospitality of Punjab farmers and rural leaders are also gratefully acknowledged.

Punjab Agricultural University  
Ludhiana, March 31, 1970.

O.P. Gautam  
J.S. Patel  
T.S. Sutton  
W.N. Thompson





## **Introduction**

A method of assessing progress in the development of an institution presupposes that there are identifiable essential elements of an institution and criteria for measuring progress toward attainment of these essential elements. A university is a complex social organization with its faculty, students, organization, methods of operation and relationships with the society of which it is a part. No two universities are the same. Nevertheless, there are common elements among universities wherever they may be. The agricultural universities that have been established in India during the 1960s contain these common elements and, in addition, have objectives and organizational and operational features that distinguish them from certain other types of institutions of higher learning. These distinguishing features must be recognized in methods used for assessing progress made in their development.

The purposes of this report are threefold: first, to present a broad outline of the essential elements of an institution and to illustrate the applicability of this framework to a university that is to serve the rural society; second, to present the essential features of an agricultural university; and third, to set forth methods and procedures for obtaining and analysing information that will lead to meaningful judgements regarding the effectiveness of an agricultural university in fulfilment of its goals.





## CHAPTER 1

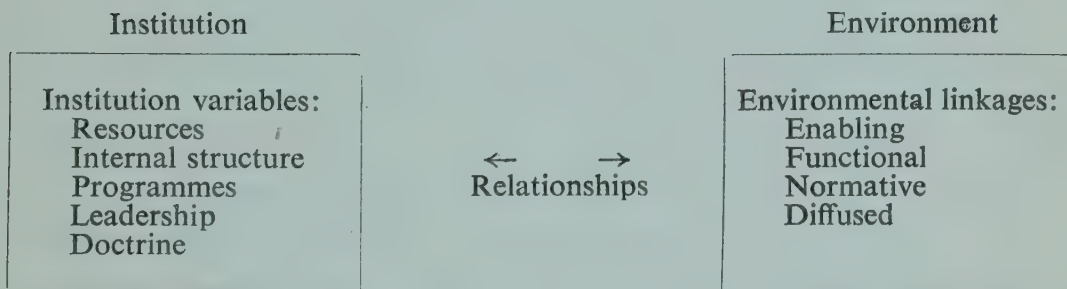
# The Institution-Building Framework

### Elements in Institution Building<sup>1</sup>

In recent years, social scientists have developed a theoretical framework to serve as a model for developing innovative institutions. These scientists are quick to point out that the theory of institutional development is not complete. At the same time, field testing of the model and growing recognition of its validity by those with experience in the complex process of university development indicate that it provides useful guidelines for those giving leadership to the process. Thus it can be a useful model in assessing progress in university development.

The institution-building model outlines two groups of variables, the “institution variables”, which are concerned with the organization itself and the “linkage variables”, which are concerned with external relations, i.e. the relationships of the institution with its environment.

### The Institution-Building Universe



*Resources* are the inputs of the organization that are converted into products or services and into increases in institutional capability. It includes not only financial resources that can be used for construction of physical plant, equipment and facilities and employment of personnel services, but also such intangibles as legal and political authority and information about technologies and the external environment.

*Internal structure* is the organization of resources into formal and informal patterns of authority, division of responsibility among the different

1. This draws heavily on Milton J. Esman and Hans C. Blaise, *Institution Building Research: The Guiding Concepts*, Pittsburgh, University of Pittsburgh Graduate School of Public and International Affairs, 1966 and Milton J. Esman, *Institution Building as a Guide to Action*, a paper presented at the Conference on Institution Building and Technical Assistance, Washington, D.C., Dec. 4-5, 1969.

units of the organization, channels of communication, and means of resolving differences and formulating consensus on priorities, policies and procedures.

*Programmes* are those actions that are related to performance of functions and services, i.e. production of the outputs of the institution. Programmes are designed to fulfil the goals of the organization as set forth in legal mandates and needed and demanded by the environment to be served.

*Leadership* is the group of persons, committed to innovations, who are actively engaged in the formulation of programmes, structuring the organization, and implementation of activities. Leadership includes persons at several levels in a complex organization some of whom are concerned with external environmental relationships as well as internal organizational matters.

*Doctrine* has been described as "the most elusive of the organization variables. It is an expression of what the organization stands for, what it hopes to achieve, and the styles of action it intends to use."<sup>2</sup> It is the body of objectives, values, and operational methods of the organization.

Every organization has relationships with individuals and other organizations. These organizations, individuals and social groups make up the environment with which the institution reacts. Some of the relationships arise from the process of acquiring resources, and others from the outputs supplied to individuals and other organizations within the environment to be served. The network of inter-organizational relationships has been designated as *environmental linkages*, of which four kinds have been indentified.

*Enabling linkages* are the linkages with organizations and social groups which control the allocation of authority and resources needed by the institution to function. *Functional linkages* provide the inputs that are needed and take the outputs of the institution. *Normative linkages* are relationships with other organizations which have overlapping interest in the objectives or methods of the institution even though no enabling or functional relationships may exist. *Diffused linkages* are relationships with individuals and groups who are not aggregated into formal organizations but influence the standing of the developing institution in its environment.

### **Institution-Building Concepts and the Agricultural University**

The institution-building concepts take on more meaning for the purpose at hand if examples are used to illustrate the several institution variables

---

2. Milton J. Esman, *op. cit.*



and types of environmental linkages in application to an agricultural university. Financial *resources* from State or Central Government, external aid, student fees, or experimental farm income can be easily understood. Faculty and supporting staff are among the most important of the resources. The new students that enter from secondary schools are a resource to be improved upon through educational processes, finally to become one of the outputs of the university. Then there are buildings that contain classrooms, teaching and research laboratories, faculty and administrative offices; research farms with facilities for crop and animal research; and transport vehicles for use of extension personnel. But the legal authority provided by the State Government through the Act establishing the university is also an essential resource. It not only provides legal authority and sets forth general objectives and responsibilities but also places limitations on the new institution. In addition it sets out some of the doctrine and prescribes guidelines for the internal structure, programmes and the powers and duties of academic and administrative leaders. It is to be emphasized that resources have their qualitative as well as quantitative dimensions. The intangibles may be equally, or even more, important than the things that can be seen, touched, or counted.

The *internal structure* of an agricultural university is concerned with such matters as the organization of the university into such units as colleges, schools, and departments; the organization and procedures to be followed by the board of management, academic council, boards of studies, and committees; and the university level officers and their relationships to academic units. The leadership of a new university must be concerned with building its internal structure and methods of operation and communication to form a cohesive unit at the same time that outputs and services are provided for those to be served.

The *programmes* of an agricultural university can be illustrated by such activities as teaching, research and extension education programmes that are to produce the outputs of the institution. The undergraduate teaching programme produces graduates for employment in government service, extension education programmes, the agricultural input supply industries, farming and other private employment, or for postgraduate study. The postgraduate programme produces more highly educated scientists for service in research and educational institutions including the strengthening of the faculty capability of the university being developed. Research programmes are the source of improved technologies to be transmitted to cultivators, input supply and marketing organizations through extension programmes.

The *leadership* group of an agricultural university bears the responsibility for moving the institution toward the attainment of its goals, at the same time maintaining the ability of the institution to sustain growth into new

areas of services, to obtain public support from the environment served, and to be innovative in its programmes and internal structure as needs arise. The leadership group includes many persons at university, college, and department levels. It is not confined to those holding administrative posts. Individual faculty members, and indeed students, may play positive or negative roles in leadership. Likewise, those beyond the day-to-day management of university affairs are an important part of the leadership group, e.g. the leadership qualities shown by members of boards of management and leaders in organizations with enabling and functional linkages may be crucial to the viability and growth of the agricultural university.

While *doctrine* may be a somewhat elusive concept, certain doctrinal elements stand out in the objectives, values, and methods of the agricultural university. Examples are the orientation toward the rural society; the focus on agricultural development and improved rural welfare; the problem orientation of research; the "Learn and Serve" motto of a university; the complementarity to be obtained through team-work in integration of teaching, research, and extension education functions; internal assessment of students; and the education of students in practical as well as theoretical matters.

The environmental linkages concepts may also be illustrated as applied to agricultural universities. An example of *enabling linkages* is the authority and responsibility vested in the agricultural university by the Act of the State Legislature "to establish and incorporate an Agricultural University for the development of agriculture." The university is also linked to the State Government as a source of financial support. The effectiveness of this linkage is crucial to institutional development and capacity to render services to be valued by society.

An effective agricultural university must have a number of *functional linkages*, linkages to organizations that supply inputs and take the outputs. In India, the linkage to the Indian Council of Agricultural Research is an example of a functional linkage to a Central Agricultural Research Organization that provides financial resources and nation-wide research coordination functions. There are also the linkages to other governments and foundations that are potential resource suppliers. The secondary schools that supply incoming students are functionally linked to the university. There are a host of functional relationships through the outputs of the university: to organizations of several types through graduates of undergraduate and postgraduate programmes; and to State Government departments, farmers, credit and input suppliers, and agricultural processing and marketing organizations through the research findings and extension education organization and activities.

The *normative linkages* of an agricultural university may be relationships to Central Government research institutions located within the State



and to other research and educational institutions in the State. There may also be agricultural colleges with interests closely allied to, and perhaps overlapping those of the agricultural university. If properly managed by university leadership, these institutions may serve in a complementary way to the agricultural university; on the other hand, this segment of the environment is likely to contain the seeds of competition for resources and stature.

The agricultural university has many *diffused linkages* to individuals and informal groups: to parents of present or prospective students; to farmers and agricultural businessmen; to teachers in primary and secondary schools; and informal relationships with political and government leaders at several levels. While these linkages are "diffuse", they are not to be considered unimportant.

The following chapter includes a presentation of the essential features of an agricultural university which, with the institution-building framework, provides the background for assessing progress of a specific agricultural university.

## CHAPTER 2

# The Agricultural University—Essential Features

### Goals and Objectives

The report of the Indian University Education Commission of 1948-49, frequently referred to as the Radhakrishnan Education Commission Report, recommended the establishment of rural universities. The existence today of the several agricultural universities in India can be traced to this recommendation. The Education Commission Report, 1964-66 recommends the establishment of at least one agricultural university in each State. This Commission points out that the agricultural universities should be committed to the following five essential purposes.

- “1. Their concern with all aspects of increasing, disseminating and applying knowledge related to agriculture, including basic and applied research;
- “2. Their primary emphasis on teaching and research directly and immediately related to the solution of the social and economic problems of the countryside;
- “3. Their readiness to develop and teach the wide range of applied sciences and technologies needed to build up the rural economy;
- “4. Their readiness not only to teach undergraduates, postgraduates and research students, but also to give specialized technical training to young people who are not candidates for degrees; and
- “5. Their emphasis on adult and continuing education side by side with teaching regularly enrolled students.”<sup>1</sup>

The tripartite function of teaching, research and extension education as well as the philosophy of service and dedication to the principle that all learning has dignity were borrowed from the Land Grant Colleges in the U.S.A. The following paragraph quoted from the April 1956 monthly report of the Ohio State University Technical Assistance Team states this philosophy:

“William Oxley Thompson, one of Ohio State University’s great presidents and a commanding figure in the land grant college association

---

1. Ministry of Education, Government of India, *Report of the Education Commission, 1964-66: Education and National Development*, New Delhi, Government of India Press, 1966, p. 350.



a half century ago reminded the struggling little land grant colleges of that day that they were really national universities and must meet the measure of national greatness. He stressed the spreading service of the land grant institutions and declared that practical utility, not snobbish academic respectability nor any notion of intellectual aristocracy, must be the test of institutional integrity. 'An institution', he said, 'is to be operated for the good it can do; for the people it can serve; for the science it can promote; and for the civilization it can advance.' This is the challenge of educational institutions to-day as it was over a half century ago."

Whereas the traditional university directs its major efforts to the teaching and research of abstract theories and philosophical ideas, the agricultural university directs and sustains its major effort towards bringing the full force of science and technology to bear on the problems of rural areas. Thus the agricultural university serves the entire population by its efforts to increase agricultural production and improve the processing and distribution of agricultural products thereby advancing the economic and social welfare of all the people.

According to the Agricultural University Committee (Cummings Committee) the agricultural university should: (a) fulfil some real needs of the people which have not been met and cannot be met satisfactorily by the existing institutions; (b) assume a direct responsibility and responsiveness to the needs of the cultivators; and (c) the territory served by the university should extend to the entire State.

The Second Joint Indo-American Team recommended that the agricultural university should "develop a programme that would ultimately make maximum contribution to the effort to increase the quality and quantity of agricultural production and improve the economic status of the cultivator. Graduates of such universities would provide leadership in all phases of agricultural production, marketing, processing and distribution."

Dr H.W. Hannah has drawn attention to essential features for successfully carrying out the mission of good teaching, meaningful research and service. The following essential features of the university adapted from Hannah's book are in accordance with the generally accepted concepts in India.<sup>1</sup>

1. A corporate board of management with adequate powers under the university act.
2. Organizational and operational autonomy.
3. Adequate and liberal financial support from Government.

---

1. Hannah, H.W., *Resource Book for Rural Universities in the Developing Countries*, Urbana, University of Illinois Press, 1966.

4. State-wide responsibility for teaching, research and extension education.
5. Unified administration and complementarity of colleges and departments and team work in the development of programmes of education, research and extension.
6. Integration of teaching, research and extension at all levels of university administration.
7. Flexible course-credit system buttressed by continuous internal evaluation.
8. Quick communication of new knowledge to students in classrooms, extension workers and rural economy.
9. Programmes to educate the maximum number of rural youth, and adult men and women with departments involved in responsibility for the subject matter being taught.
10. Acceptance by all concerned of a philosophy of service to agriculture and the rural community.

### **The Essential Components**

To accomplish the broad mission outlined above, the basic elements of an agricultural university should consist of the following:

1. University administration;
2. University development plan;
3. Colleges;
4. Departments;
5. Tenure and promotion policy;
6. Resident instruction;
7. Research programme;
8. Extension programme;
9. Library; and
10. The spirit and doctrine.

**University Administration.** In discussing the basic elements of an agricultural university one must begin with the university administration. The programme in development will depend primarily upon the effectiveness of the structure, functioning and vision of the administration. For fulfilling the responsibility entrusted to it, the agricultural university should set up an organization based on the Model Act drafted by the I.C.A.R. for the



agricultural universities. The organization should consist of constituent colleges of agriculture, veterinary medicine and animal sciences, home science, agricultural engineering and technology, and a school of basic sciences and humanities of which at least three colleges should be located on a single headquarters campus. All State-supported research stations and colleges of agriculture, veterinary medicine and animal sciences should be transferred to the university and made its constituent units.

The Board of Management, the Academic Council, and the Boards of Studies or Faculties including postgraduate studies are to be set up as authorities of the university. The Vice-Chancellor, the Registrar, the Comptroller, the Deans of Faculties/Colleges, the Director of Research and the Director of Extension are the officers of the university. It would be desirable to declare the Director of Students Welfare, the Director of School of Basic Sciences and Humanities, the Estate Officer and the Librarian also as officers of the university in the Act. To assist in framing policies and arriving at decisions, there should be councils or committees dealing with administration, finance, appointments, research, extension education, students welfare, library, sports, students counselling and discipline, postgraduate education, campus planning and staff housing.

The willingness of these university officers to cooperate and collaborate with each other, their ability to look forward and plan ahead, their skills in harnessing resources in managing men and stimulating them and creating competition consistent with harmonious working, will largely determine the pace of growth and the nature of development of the university.

Conditioned as they are in a tradition-bound and somewhat feudal environment, the key officers have to initiate democratic and progressive measures involving personal respect, integrity, trust and confidence. Liberal delegation of powers and authority accompanied with frequent accounting of achievement and performance have to be developed. To develop participation, all important matters of policy need to be resolved in committees which may be set up not only at the university level but also at the college and departmental levels. The committees, without being unduly large, should involve as many of the academic staff as possible. In order to get wide faculty participation, no faculty member should serve on more than three committees in a college or a department. In a college or a large department there should be separate committees for research, teaching, extension education, and administration. Team work at all levels needs to be developed with a focus on service to the university.

Since most of the key personnel may have been educated as well as have worked for a long time under the traditional system, they need to be reoriented to the new system of agricultural universities. Frequent opportunities should be provided for them to study operational procedures a

other agricultural universities where they can be exposed to different environments and have time to discuss problems of common interest.

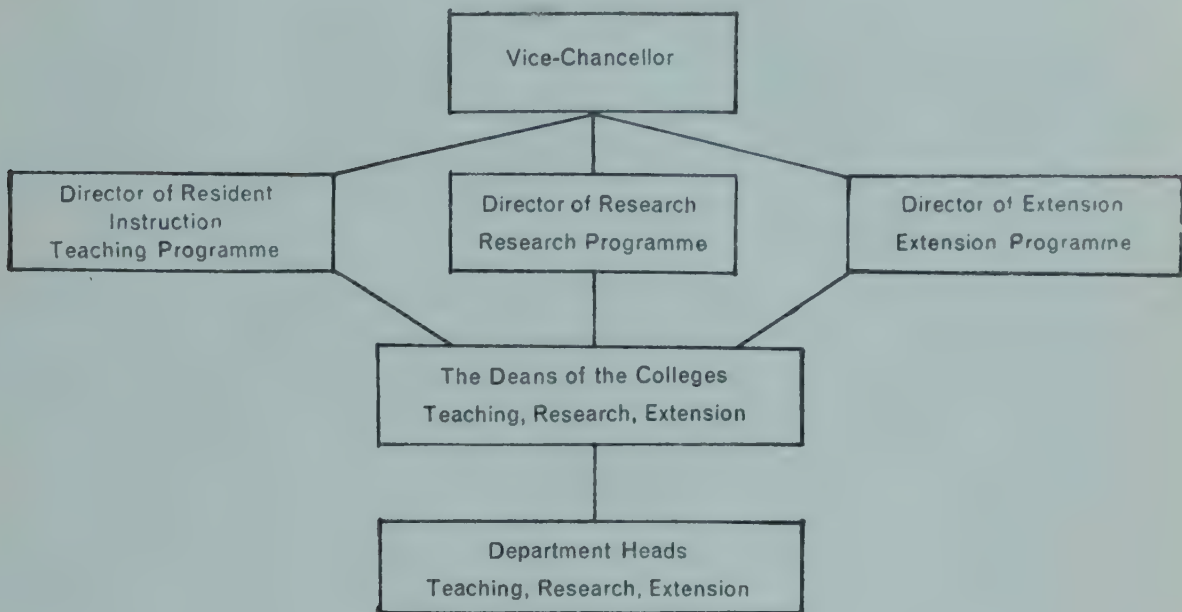
There is considerable turn-over of staff in an agricultural university because some staff members go for higher training, others leave the university to improve their prospects, and the departments expand. The university should, therefore, conduct an orientation course for new staff members each trimester. This course should be designed to: (a) familiarise the staff with the facilities of the university and its operation; (b) promote the philosophy and explain the objectives of the university; (c) provide an understanding of the integration of research, teaching and extension; (d) develop an understanding of teaching methods and standards including the internal system of examinations and grading system; (e) emphasize the role of coordination, collaboration and cooperation. Such a course should be university-wide and should be conducted by those who are committed to the goals and doctrine of the university and its educational system.

In addition the university should organize regular seminars on the improvement of teaching, the internal examination and grading system and the conduct of research and extension programmes. Such seminars should be conducted at least once a year in each college with the participation of selected leaders in departments of other colleges for stimulating interest and free discussion.

At the first All-India Conference on Agricultural Education held in October 1969 as well as at the convention and workshop of the Association of Indian Agricultural Universities in February 1970, the group on resident instruction and student welfare, making note of inadequate attention to teaching, recommended that effective steps should be taken to strengthen undergraduate teaching and to give due recognition and proper incentive to the teachers. For this purpose it is necessary to provide for a regular review of the teaching programme to determine the progress being made by each department in improving teaching, including internal evaluation and grading. At present, annual reports are prepared and published for research and extension education activities. A similar department-wise report should be required for resident instruction. A university-wide Director of Resident Instruction is necessary on the lines of Directors of Research and Extension. The duties and responsibility of the Director of Resident Instruction should encompass both undergraduate and graduate instruction and include the improvement of curricula and courses, the quality of teaching and evaluation, and the securing of recognition for teaching comparable with that for research and extension.

The following academic organization chart illustrates this recommended type of university organization.



*Academic Administration Organization*

In the interest of efficient functioning, the lines of communication should be clear-cut. The organizational structure should be such that there is no misunderstanding or confusion regarding the authority of the officer to whom an inquiry, request or grievance is to be addressed.

Since the Vice-Chancellor is the chief administrative officer of the university, he holds a key position in determining policy regarding all matters concerned with the effective operation of the university. Because of his many duties, particularly those concerning the State and Central Governments he must delegate responsibility and authority to other officers of the university. The number of officers reporting to him should be small, and most matters should be handled by those in whom he has entrusted authority at the various levels. From the academic side, an ideal arrangement is illustrated in the Chart given above.

As will be noted there are three officers reporting to the Vice-Chancellor on academic matters, Director of Resident Instruction, Director of Research and Director of Extension. Matters brought to the attention of the Vice-Chancellor by Deans or Department Heads should be referred back to the appropriate line officer for action or solution. It is only in the case of matters which cannot be resolved at these or lower levels the Vice-Chancellor should be consulted. However, he should be kept informed at all times how these matters are resolved. The role of the Director of Resident Instruction is dealt with in the section on instruction. The post of Dean

of Postgraduate Studies can be converted into that of a Director of Resident Instruction who can look after the instruction at the undergraduate level as well as the postgraduate level.

The Deans of colleges are to look after the coordination of teaching, research, and extension education in addition to: (a) making the student advisory programme operation more effective, (b) stimulating departments to attain greater heights, and (c) looking after the common house-keeping duties for the departments of the college.

The Dean of the College is to be judged by his capacity to: (a) coordinate and integrate teaching, research and extension education; (b) win recognition for the college from the academic staff of other institutions and colleges; (c) secure the respect of the students for standards in teaching, examination and grading and student-advisory work; (d) service the needs of the rural economy so far as they relate to his college; (e) secure and retain men of high calibre; and (f) skilfully develop collaborative and cooperative linkages with agencies, institutions, departments, universities and governments. The Dean of a college has equal responsibility for the teaching, research and extension activities of the college, and should be held equally responsible for deficiencies in any one of these activities. The College Dean should report directly to the appropriate director regarding academic matters pertaining to that function.

*Tenure policy.* The appointment of the Vice-Chancellor is made on a definite tenure basis, i.e. for a fixed period of years. He can be reappointed for more than one term. Appointments of all university officers should be on a definite tenure basis following the example of the Vice-Chancellor. This principle should be extended to Deans and to Heads of Departments. The administrative advantages of such a system are so obvious that they hardly need to be stated. Inept selections, break-down in physical capacity, officers who become stale and ineffective, and personality conflicts are taken care of by a system of tenure, which would permit the reversion of these officers to their parent departments for service in their academic discipline without reduction in salary. All Heads of Departments, Deans and Directors should hold their offices on a definite tenure basis subject to reappointment any number of times as long as their work is satisfactory.

**University Development Plan.** The university administration develops certain common facilities which are required by all the colleges. These are library, printing press, sports grounds, parks, hostels, hospital, staff-housing, transport, central stores and central purchases, construction and maintenance of physical plant, student registration, staff recruitment, student placement, experimental stations, glass-houses, greenhouses, water, electricity and gas supplies, etc.



Concurrence of the State Government and the Indian Council of Agricultural Research should be obtained on the Five-Year Plan of the University Development to ensure their commitment for financial assistance; to ensure proper coordination of university-development programmes with similar developments elsewhere in the country in the field of agricultural research and education; as well as to ensure gainful employment of the graduates and postgraduates that are trained at the university.

Each agricultural university should have a long-range plan of development covering a period of 10 to 15 years, visualizing the student enrolment, the strengths of departments and colleges including new departments, the laboratories and classrooms, the library, the hostels, staff-housing and facilities. There should also be a short-term five-year plan of development which would in addition include a staff-training programme designed to meet the current needs of the specialists and also to develop depth in scientific and leadership strength. Specific "understudies" should be selected and given in-service training before they are sent out for training elsewhere. This planning should begin at the departmental level.

To enable the department to work out plans for developing its faculty members, the Deans and Directors should first work out estimates of student enrolment at undergraduate and graduate levels and provide an indication of the extent of strengthening of teaching, research and extension education activity of the department concerned.

**Colleges.** The colleges are the academic units which constitute a university. The departments are the basic units of the college and in turn of the university organization. Related departments are accommodated in a college so that interaction amongst them is facilitated. Common house keeping provides basic facilities and services and enables the departments to concentrate on academic activities. As mentioned earlier, an agricultural university will normally consist of five constituent colleges of which at least three are to be located at the main campus of the university. Likewise a college can be expected to have three or more well-developed departments of study. A minimum staff based on accepted standards of work load of teaching, research and extension education should be provided for each department. The budget of the college should reflect the provision for common services as well as the provisions for the departments. Budget of a department should be developed and controlled by the Head of the Department concerned under overall supervision of the Dean of the College.

*The College of Agriculture.* The focal point of an agricultural university is the College of Agriculture. A number of the agricultural universities of India have been developed from colleges of agriculture or colleges of agriculture and veterinary medicine which had already been in

existence. Organizational set-up of these colleges in terms of departments, prior to the establishment of the agricultural university, was developed to cover the full range of subjects taught at the undergraduate level for the baccalaureate degree programmes. It was, no doubt, a legacy which in most cases had to be accommodated, to start with, without drastic reorganization when the university was established and had, therefore, a significant effect on the organization of the constituent colleges. Traditionally the agricultural college includes departments or sections of Agronomy, Horticulture, Plant Breeding, Soils, Plant Pathology, Entomology, Engineering and Extension Education. These are the basic departments but this is not the only desirable grouping. For example, a department of agronomy might include the instruction and research in plant breeding. Since departments are based around men and facilities, conflicts of interests and personal incompatibility often lead to reorganization. Both too small and too large departments are a handicap.

Instruction in the animal sciences particularly as related to the breeding, feeding and management of farm livestock is essential in the undergraduate education of agricultural students. This instruction, for reasons mentioned later, may be provided by a separate Department of Animal Sciences in the College of Agriculture.

Likewise instruction in agricultural engineering, particularly as related to such topics as farm mechanization, water resources development and management and the like are essential in the instructional programmes of B.Sc. Agriculture students. This instruction may be provided by a strong Department of Agricultural Engineering in the College of Agriculture or, if a College of Agricultural Engineering is developed, this instruction is more appropriately provided by that college.

A Department of Food Technology may appropriately be assigned to either the College of Agriculture or the College of Agricultural Engineering. While instruction in food technology at the undergraduate level is not needed at present, there is an urgent need for moving ahead with research and development programmes in food storage, processing and preservation to reduce food wastage. Food technology often gets dispersed along with the commodities to which it relates such as dairy and poultry technology. It is advantageous to consolidate the dispersed programmes under one organized unit without duplicating the already existing facilities.

*A College of Basic Sciences and Humanities.* Agriculture is an applied science and depends heavily on the biological, physical and social sciences which provide the background and support for the agricultural sciences. In addition, it is expected that graduates of the agricultural universities will have had an opportunity to study subjects such as languages, literature and art, thus acquiring at least a minimum knowledge of their heritage.



In the beginning, the basic sciences and humanities faculty may be assigned to the College of Agriculture. The next logical step may be to organize a School of Basic Sciences and Humanities which serves wholly a service teaching programme for the College of Agriculture and other technical colleges. When the university develops sufficiently in terms of competent faculty and research programmes, the School of Basic Sciences should become a College of Basic Sciences and Humanities and admit students to postgraduate classes. In order to attract staff of desired quality, it is important that opportunities for research in addition to the resident instruction of postgraduate students be provided. Such research and postgraduate programme should be oriented toward problems relating to the rural area. Depending on such factors as the availability of arts and science colleges in the community, and the availability of high-quality graduates from these colleges seeking admission to the Agricultural University postgraduate study, the College of Basic Sciences and Humanities may continue for some time without admitting students to an undergraduate degree programme. Its research contributions no doubt significantly enhance the overall research output of the university. This college should be provided with resources in terms of finances, laboratories, library services, field area and other needs to develop research programmes of significance. Eventually, these departments should be permitted, in fact encouraged, to engage in highly sophisticated and theoretical fundamental research. This day should be delayed however, until the application of science and modern technology to agriculture has resulted in a level of agricultural production sufficient to meet India's basic needs for food and fibre.

The essential subject matter units in a College of Basic Sciences and Humanities are: Botany, Chemistry, Economics, Sociology, Genetics, Mathematics, Geology, Microbiology, Languages and Literature, Physics, and Zoology.

In the earlier stages of development certain combinations of related subjects may be advisable. Thus mathematics and physics, and botany and microbiology may be combined in single departments in the College of Basic Sciences and Humanities and the instruction in geology and meteorology, which more properly belong to Department of Earth Sciences in the College of Basic Sciences and Humanities, may be included in the course programmes of the Departments of Soils and Agronomy respectively or in some other departments which may have extensive use for geological or meteorological information.

*A College of Veterinary Medicine.* The development of a College of Veterinary Medicine as a constituent college on the same campus as the College of Agriculture has many advantages. For example, the Agricultural College can provide instruction in animal sciences needed in the undergraduate programme of the College of Veterinary Medicine. In turn, the

College of Veterinary Medicine can provide instruction on animal hygiene needed in the undergraduate programme of the College of Agriculture.

The traditional veterinary college of India has attempted to serve a dual function: first, that of training students in medical subjects related to diagnosis, treatment and control or prevention of animal disease; and secondly, that of training students in subjects related to animal production practices such as breeding, feeding, and management. It has been the custom to follow a fixed curriculum of courses for all students regardless of whether their primary interest was on the medical side or the production side. Consequently there have been shortcomings in the preparation of all students for service careers in either the medical side or the production side. However, course composition of the B.V.Sc. programmes offered by most veterinary colleges would indicate that emphasis has mainly been on disease-control aspects leading to the neglect of animal-production aspects. Time has come when India needs to augment animal production parallel to crop production and, therefore, needs to develop competent specialists in animal production separately from the area of disease prevention and control.

Traditionally, training in animal production as indicated earlier has formed part of the work of veterinary colleges in India. Only lately some of the agricultural universities have organized departments of 'animal husbandry' as constituent units of agricultural colleges. Appreciating the importance of specialised training in animal production, the erstwhile Punjab Agricultural University established a separate College of Animal Sciences.

Since the breeding, feeding and management of animals is an integral part of the total agricultural operation of practically every farm and will continue to be so in the foreseeable future and since agronomic practices and cropping patterns must be modified or adjusted to meet the requirements of the farm livestock, the consensus of opinion of all those interested in animal production appears to be to establish strong 'animal science' departments as constituent units of colleges of agriculture.

Assuming that the primary function of a veterinary college is to train students in the medical sciences as applied to farm animals and turn out graduates who can effectively manage the health of the livestock population of the State and contribute to the advancement of the veterinary profession both nationally and internationally, the subject matter areas of study may be combined into departments such as the following: Anatomy and Histology; Bacteriology (including Virology) and Preventive Medicine or Hygiene; Obstetrics and Gynaecology; Medicine (including veterinary jurisprudence); Physiology and Pharmacology (including physiological chemistry); Radiology and Surgery; Parasitology; and in addition there should be a common service unit organized as veterinary clinics.



*A College of Agricultural Engineering.* Because of the need for applying modern engineering and technology to the problem of agriculture, it is essential to develop a strong Agricultural Engineering component of the agricultural university. In the beginning the component may be a strong Department of Agricultural Engineering in the College of Agriculture. This, however, may be a temporary arrangement and can be succeeded by the development of a college as soon as the resources to support a good staff, adequate buildings and the essential engineering equipment for instruction and research are available. The development of an educational programme leading to B.A.E. should not be undertaken until there is a distinct need for more graduate engineers than are being trained at the time. The development of a college will permit the inclusion of the engineering disciplines which support and service agricultural engineering and provide for a well-rounded agricultural engineering education. In addition those members of the instruction staff representing such engineering disciplines as civil, mechanical and electrical engineering can engage in research oriented to the problems of agricultural production, processing and distribution thereby strengthening the research programme of the university. To these may be added a department of chemical engineering if the processing of food becomes a significant programme of the university. For some time, however, the emphasis should be on Agricultural Engineering and the B.A.E. the only degree programme offered.

*A College of Home Science.* Women's education in India has not kept pace with the progress in education for men. However, the influence of the housewife and mother on the economic, social and spiritual outlook of the Indian family has never been challenged. In fact the Indian mother may have a more profound influence on her children than her counterpart in many of the Western nations. The strength and welfare of a democracy depends upon an enlightened citizenry, and the need for educational opportunities for the young women of today who will be the wives and mothers of tomorrow is urgent.

Higher educational opportunities for rural women have been almost non-existent. True, there are a number of women's and co-educational colleges in India, but these have been attended largely by young women from urban families usually of the upper-middle or upper income level. Therefore, the development of a college of Home Science charged with the responsibility of providing instructional, research and extension educational programmes oriented toward the improvement of rural homes and farm family life is an essential part of an agricultural university. Its instructional programme should be so designed and taught that its graduates will be eager to return to or to serve the interest of the rural areas with the determination and conviction that their education will be put to use in the improvement of the levels of living and family life of rural people.

The essential instructional units of a College of Home Science are: Food and Nutrition; Textiles and Clothing; Child Development; Home Management; Home Science Education and Home Science Extension. These may be further consolidated for convenience of administration. For example, Home Science Education and Extension may be combined into a single department. The over-fragmentation into a multitude of units with full departmental status should be avoided. For courses in basic sciences and humanities, the College of Home Science should draw upon the College of Basic Sciences and Humanities and similarly for non specialized course in Extension Education it should utilize the Department of Extension Education in the College of Agriculture. The tendency to self-containment should be discouraged.

In recognition of its status of education of the rural women of India it is important that the Colleges of Home Science, particularly those in the agricultural universities, give a high priority to the teaching of short courses and workshops to educate the maximum number of rural women.

**Departments.** The departments are the basic academic units of a college and are responsible for the teaching, research and extension programmes. All teaching, research and extension education staff relating to a discipline should be members of the concerned department. The Head of the Department should be responsible to the Dean of the College for all three functions of the department. The strength of the college and the university revolves around the competence and excellence of its departments. Leadership at the departmental level determines its growth and development. Capable departmental heads who are able to motivate their team and provide them with required facilities and resources without impinging on their initiative and creative ability, are in most cases the future Deans and Directors.

To ensure the status of a department, certain minimum essentials must be met. It should normally be headed by a Professor but in no case by a teacher of lower rank than an Associate Professor and should have specialized staff in the principal sub-disciplines. There should be a separate budget, laboratories and experimental area if required, and adequate delegation of powers and authority to manage the funds and the staff of the department. The delegations should be such that the Dean of the College is left sufficiently free to attend to his main task of integrating and coordinating teaching, research and extension education at the college level. The leadership of the Head of the Department develops through the exercise of initiative and specialized interests.

The Head of the Department is to be judged by his capacity to: (a) enthuse his staff, (b) develop the department, (c) win the recognition for it from the scientists in the same branch, (d) secure the respect of the students for its teaching and grading standards, (e) service the needs of the rural



community so far as they relate to the department, (*f*) integrate teaching, research and extension education, (*g*) cooperate and collaborate with other departments, agencies and institutions in common tasks, and (*h*) attract and retain men of calibre.

*Staff Strength of the Department.* Most of the departments in an agricultural university, regardless of the college to which they are attached, have the tripartite function of resident instruction, research and a field extension programme. Guidelines for the work load for different categories of staff were accepted in general at the Second Workshop on Agricultural Universities in February 1965. To effectively carry out these multiple obligations a greater strength of staff is required than would be the case if resident instruction were the only function. Not only is there an increase in the number of faculty required but also there is a difference in the quality and qualifications of the faculty needed. Those in the department who are assigned to research and the teaching of postgraduate students are usually more highly specialized than required for the teaching of undergraduate courses. This is not to imply that the highly specialized and experienced senior professor should not teach undergraduate courses. In fact, the undergraduate students should meet every senior professor in their classroom instruction. Both students and professors should find this experience challenging and highly motivating.

There should be no limitation on the number of professors in a department. It should be possible for junior staff members to advance in rank within their departments strictly on a merit basis. In this way the more capable staff members can be retained in their specialised field and continue their professional growth. At the same time the staffing pattern should be so arranged and managed that there are always young men with energy, drive and inquiring minds in every department. These are the people who add zest and vitality to the departmental programme. Their interests in bettering their position and attaining levels of achievement beyond that reached by those who taught them should be encouraged and carefully directed. If these ambitions are being achieved, progress is being made.

Departments offering programmes leading to the Ph.D. degree should have greater depth in staff than those whose teaching is at the undergraduate and M.Sc. levels. There should be highly qualified specialists in each of the well-defined branches of the disciplines. For example, the Department of Chemistry that offers a Ph.D. degree programme should have senior highly qualified specialists in each of the major branches of chemistry, namely, inorganic chemistry, organic chemistry, physical chemistry, analytical chemistry and biochemistry. The ultimate staffing goal of such a department would include one or more specialists of the rank of professor in each of these branches of chemistry. Such a staffing pattern will provide

the depth of staff and breadth of subject coverage required in the education of postgraduates at the Ph.D. level.

*Growth of Departments.* It should not be expected that all colleges and all departments within the colleges should be developed at the same rate. In an agricultural university that is sensitive to the needs of the rural people of the State, priorities in the development of colleges and departments will be in response to these needs. The rate at which any discipline should grow is related to a complex set of circumstances and conditions most of which may be interrelated. All development is interrelated and the discovery or innovation that triggers the chain reaction may come from a wide variety of sources. These may come from an area in basic science as well as from the applied agricultural or engineering sciences. The disciplines which are likely to produce needed information or science adaptations that can quickly be applied in the field will normally be given priority attention and will reach a relatively advanced stage of development earlier than those less likely to produce applicable new knowledge or knowledge adaptations.

Although certain segments of the university will develop more rapidly than others because of priority encouragement or aggressive leadership, all segments must be permitted to grow as the student enrolment increases, and expand their programmes in research and service. Thus every segment of the university should constantly grow and expand their respective services although not at the same rate. In a university worthy of the name, each segment makes a contribution to the whole and no part should be allowed to stagnate. Even the departments least concerned directly with agricultural development should be encouraged to develop programmes of services in rural community uplift.

**Tenure and Promotion Policy.** The university should issue for the benefit of its academic staff a firm policy statement regarding the principles of promotion and holding of a post of tenure. The matter for tenure for administrative personnel has been dealt with previously. Conditions under which the tenure will be renewed should be defined.

To impress upon the staff the significant points that are taken into consideration while determining merit, it is necessary to lay down guidelines which form the basis for recommending promotions. Such an orderly and impartial procedure will provide satisfaction to the staff. The criteria should be developed by the Academic Council.

The confidential records of academic staff should be considered but not totally relied upon for evaluation. Teachers, researchers and extension workers should be equally eligible for merit recognition. No more importance should be attached to one type of field of activity than to another.



The conditions under which a staff member qualifies for 'merit promotions' under the merit promotion scheme should be spelled out. The policy statement should also make clear when the posts are advertised and when they are reserved for promotion.

Recognizing that promotions in rank should always be accompanied by an increase in salary, there may be some limitation on the number that can be financed in any given academic year. Even so, at budget-making time the university administration can, in consultation with the Academic Council, determine the total number of promotions that can be made in each of the ranks and the Deans advised on the number at each of the ranks that can be allotted to their colleges. The Deans in consultation with the Directors and the Board of Studies or other advisory body can then determine the allocation at the department level.

The criteria for recommending promotions based on merit and years of service to the university should include amongst others the following items:

1. Ability and Productivity:

(a) As a teacher. Textbooks published, laboratory manuals prepared, frequency of revision of course notes and syllabus, library assignments, effective use of examinations to determine the students progress, student evaluation, student advisory service, development of visual aids, and adequacy of coverage of the course syllabus.

(b) As a research worker. Number of significant research publications, the development of superior plant varieties or animals with superior productive performance, development of superior research techniques, the development of new innovations which are widely adopted, the development of new machines or implements or the significant improvement of old ones, the development of effective research teams and the use of the team approach in solving complex problems, and imaginative new approaches to the solution of problems.

(c) As an extension worker. The best measurement of superior extension ability is the rate at which change is brought about in the area being served by the person. Changes may be specified like the amount of fertilizer used, or the acres planted to improved varieties, acres under improved irrigation practice, introduction of new techniques, machines or innovations; or in more general terms such as the improvement in the general economic level or the improvement in general welfare.

2. Recognition for meritorious achievement by the Government, a scientific society, another university or an outside body.

3. Special contribution to the development of the university or special service to the university including the student body or the community.

**Resident Instruction.** The main elements of resident instruction are admission requirements, quality of the courses of study offered, total course load prescribed for the degree programme, standards of teaching, evaluation methods, practical training, and the supplementary reading required in addition to classroom instruction.

*Entrance Requirements.* Importance of keeping the admission requirements sufficiently high cannot be over-emphasized if we are to improve the standards of agricultural education and if students are to derive the full benefit of university education. These requirements of course vary from university to university. Constant effort should be made to improve these standards gradually as the situation permits.

*Courses and curricula.* The course work at undergraduate level has to be a judicious mix of subject matter in basic sciences and humanities, core subjects prescribed for the degree programme and electives in the allied fields of study. The main objective, however, is not to teach all that is known on a subject. The attempt should be to cover more basic and important aspects of science and agriculture. Selection of courses should be consistent with the interest of each student as well as the field of his further specialisation.

The entire educational programme should be designed to provide a base for continued intellectual and professional growth and taught in a way that will stimulate the development of self-study and inquiry habits. The motivation of students to develop sound attitudes and study habits is the most important thing that can happen to them during their undergraduate years.

Most agricultural universities have adopted the trimester system in preference to the traditional annual session. Three trimesters, each with a duration of 14 weeks, provide 235 to 240 working days per year compared to 180 to 200 days in the annual system. Agricultural universities are further characterized by course-credit system of instruction which they have adopted with a view to provide the necessary flexibility in course-offerings for students to suit their requirements and capacity.

A work load of 16 to 18 credits (4-5 different courses of 3-4 credits each) is considered normal for an undergraduate student. A credit hour connotes one classroom lecture a week or a practical of 2-3 hours a week. In addition, a student is expected to put in two hours of supplementary reading outside the classroom for each hour of formal lecture. For students admitted after Higher Secondary the normal credit requirements are 200 over a period of 4-year degree course in agriculture and home science and 250 over a period of 5 years in veterinary science and agricultural engineering. Experience over past years indicates that these prescribed limits of course load are rather high for most students with the result that they are not able



to devote as much time for library consultation and home-work as desirable. With better coordination of courses and improvements in teaching methods and library facilities, the course load should be brought down gradually to a more realistic level.

The Second Workshop on Agricultural Universities recommended the approximate weightage for different groups of subjects for agriculture, veterinary medicine, and agricultural engineering as follows:

Subjects	Credit hours		
	Agriculture	Veterinary Medicine	Agricultural Engineering
Humanities	20	20	20
Basic Science	40	40	40
Core Courses in College	100	190	190
Electives	40	..	..
Total :	200	250	250

The First Convention of the Association of Agricultural Universities held in February 1970 has recommended that the Home Science course should be of 4 years duration after Higher Secondary and the relative weightage for subjects should be as follows: basic science and humanities, 30 per cent; core courses in home science, 51 per cent; agriculture and animal sciences, 10 per cent; and electives, 9 per cent.

For the Master's degree, the Second Workshop recommended two years residence and a minimum of 45 credits to be earned through course work, of which 20 per cent should be from a minor supporting field. The thesis is to show evidence of good experimental technique, clarity and precision of expression but it need not be original research. For the Ph.D. programme the recommendations were two years residence after the Master's degree, 30 to 40 credits for course work of which 20 per cent may be in the minor field, and the dissertation should be exacting in all respects with evidence of clear and precise expression, reasoning at an advanced level and a thorough knowledge of the field concerned.

*Evaluation and Grading.* A significant feature of the education system adopted by agricultural universities is the internal evaluation. The system permits assessment of students on the basis of day-to-day performance

and thus serves as an incentive for continued effort and study. Most agricultural universities have adopted with minor variations a 4 point system of grading such that letter grade A is equivalent to 4 grade points, B=3, C=2, D=1 and F=0. The minimum grade point average that a student must maintain to continue in the college is 2.00 for undergraduate and 3.00 for postgraduate.

Variations in standards of evaluation between universities, between campuses of the same university as also between courses offered by different teachers of the same college have presented some difficulties. Such variations obtained within a university can be largely removed through better orientation of teachers to the grading system and internal checks by the departmental heads or deans. But variations in grading systems obtained between universities can be removed only through common understanding achieved at a forum like the Convention of Agricultural Universities or All-India Conference on Agricultural Education. It is necessary to achieve this uniformity to facilitate transfer of credits and migration of students from one university to another.

Lately the fairness of the internal evaluation system has been a controversial subject. Also the substitution of trimester system by semester system has been a subject of debate. An insight into the details of these problems would, however, suggest that the weakness lies either with the college administration or with the teacher himself, but not with the system. Proper orientation of teachers coupled with periodical internal checking could remove most of these difficulties. Of course, the system presupposes highest standards of integrity on the part of teachers and naturally will collapse if considerations other than merits come in while awarding grades to a student and the teacher's integrity is in doubt. Some also believe that alphabetical grades do not bring out variations in students performance as precisely as the numerical marking. Overall grade point average, however, does bring out the real differences. The record of credentials together with critical testimonials from teachers indicating student capabilities, potentialities and attitudes would no doubt bring out all that would interest any potential employer.

With the abandonment of the external examination system in the agricultural universities, although a giant step forward, their only system for maintaining standards of excellence in education, although admittedly weak and ineffective, was abandoned at the same time. To date, the agricultural universities as a group have not developed a system of standards which may be uniformly applied and constantly upgraded to reasonably assure the maintenance and improvement of educational standards at both the undergraduate and postgraduate levels. Until these universities develop an accepted substitute plan for external examinations, a heavy



burden is placed in each of them to not only maintain high educational standards but also to constantly upgrade them.

At the undergraduate level this may be done by (1) special programmes to improve the methods of instruction, (2) careful reviews of course offerings and course content at prescribed intervals, (3) the active involvement of the Academic Council and Boards of Studies (or such other bodies as may be formally constituted for this purpose) in all academic matters related to standards of academic excellence, and (4) at the postgraduate level by the establishment of rigorous standards for postgraduate education under the watchful supervision of the Director of Resident Instruction and an active Postgraduate Committee.

*Teaching Methods.* Effective teaching means not merely passive transference of knowledge and information pertaining to the subject matter from the teacher to the student; it aims at stimulating intellectual curiosity and quest for more and new knowledge. The educational process should motivate a student to develop self-study habits, an analytical approach and sound attitude towards learning leading to continued intellectual growth and capability for drawing inferences. For this, class lectures must be supplemented by group discussions. Students must be encouraged to be critical and even to challenge ideas and concepts in the interest of deeper and thorough understanding of the subject.

Well-selected textbooks are a good source of knowledge but these cannot be a substitute for current literature, particularly at graduate level. The use of the library should, therefore, be encouraged through regular assignments for reference reading. How far students have been brought up to date with the latest research findings, both basic and applied, is a critical measure of good teaching. Use of teaching aids goes a long way to make teaching effective and interesting. Agricultural universities will have to make a special effort for developing appropriate teaching aids for improving teaching programmes. Efficient student counselling also contributes to teaching programmes.

With better-trained staff that has become available to agricultural universities through various programmes of advanced training within and outside the country, with the augmentation of library and laboratory facilities as well as with the introduction of trimester and course-credit system with integration of teaching and research, the teaching standards have definitely improved at agricultural universities over past one decade. Recently at the Convention of the Association of Agricultural Universities, an anxiety was, however, expressed that the teaching standards are deteriorating at some of the universities. The tendency of teachers to give greater attention to research compared to teaching, negligence of teachers to cover the entire course, leniency in evaluation, irregularity in student attendance in the class were some of the reasons advanced for lowering of teaching standards.

Most of these complaints stem from insufficient supervision of and attention to resident instruction programmes. To improve upon this situation a project should be prepared in each department to cover all the courses. It should outline measures proposed to improve teaching and grading. The department should prepare a report at the end of each trimester on the coverage of various courses, distribution of grades, use of teaching aids, practicals held, number of class assignments given, quizzes and examinations, etc. An annual report on the performance and progress of resident instruction should be prepared by the Director of Resident Instruction on the basis of the reports submitted by Deans and department heads parallel to the research report prepared by the Director of Research.

*Practical training.* One of the special features of Land Grant College education from which we have borrowed heavily in developing agricultural university pattern of education is the quality and strength of practical training. The main emphasis should be on imparting training in modern scientific techniques and new skills needed to modernise agriculture and to create a reasonable degree of confidence in the students for using them to tackle the problems faced in actual farming. The Second Workshop on Agricultural Universities also recommended that the specific nature and scope of practical training for students in agriculture should be related to such objectives as (a) learning to apply principles of scientific agriculture under actual farm and village conditions, (b) to develop skills in performing various agricultural operations, and (c) to learn methods of making farmers' education more effective. The Workshop recommended that in addition to regular class practicals, half a day each week may be reserved to do practical farm work. It was suggested that practical manuals should be developed for each course of study to ensure the proper conduct of practical training. It must be recognized that programmes of practical training have been particularly weak in the past. In most cases, they still continue to be weak. Excessive course load, insufficient preparation on the part of instructors, under-equipped laboratories, lack of teaching aids, etc., are some of the factors responsible for holding up progress in this area. A special effort needs to be made to improve the practical training at the agricultural universities.

*Postgraduate Education.* The ever-increasing need for application of science and technology to modernise agriculture has placed unprecedented demands on institutions of higher learning for training high-quality scientists and specialists and to strengthen programmes of research and education. Consequently there has been considerable expansion in postgraduate education, particularly at the newly established agricultural universities. Today the need is not so much for expansion but for improvement in quality of education. We need well-trained scientists capable of bringing the latest methodology and scientific principles to bear on the problems of agriculture.



Agricultural universities have been organized particularly to meet this need.

Postgraduate education is not a mere extension of undergraduate education. Inter-disciplinary approach, inculcation of the value of purposeful research, training in modern research methodology, independence in thinking and approach and development of analytical outlook and capability to draw logical inferences are some of the specific features of postgraduate education of an agricultural university. In order to meet these objectives, certain pre-requisites have to be provided such as a competent postgraduate faculty, adequate research facilities and special library facilities. In a number of cases, however, there has been uncontrolled growth of postgraduate education. If quality is to be maintained, authorization for starting postgraduate departments should be held up until the following conditions are fulfilled: (1) the department has attained maturity as judged by teaching and examination standards which provide satisfaction to the staff as well as to the students; (2) the department should have a significant research programme in progress; (3) more than one of the specialised areas within the department are manned by highly specialised faculty members; (4) there should be adequate laboratory space and equipment and the required farm and library facilities; and (5) the specialists who propose to guide postgraduate students should have their own active programmes of research and should not be over-burdened.

In addition to the requirements for the M.Sc. degree, before the Ph.D. degree is offered, most of the specialised areas should be manned by specialists of either the professor or of associate professor rank. Ordinarily the specialist should have a degree at least equal to the one being offered by the department.

It is advisable to concentrate postgraduate programmes on the main campus of a university inasmuch as a member of supporting disciplines are necessary to develop a strong postgraduate programme. Accreditation through a team of specialists in the subject matter area to assess the progress and strength of a postgraduate department must be considered as a self-imposed requirement by each university.

There is need for effective coordination in the growth of postgraduate education at the national level as well as within a university. Thus the availability of high-quality postgraduate education at other institutions should be kept in view while considering the advisability of initiating new postgraduate degree programmes.

The recommended arrangement for postgraduate education to be a part of the responsibility of the Director of Resident Instruction has been outlined earlier. In addition to the normal duties of the Dean of Postgraduate Studies as outlined in the Model Act for Agricultural Universities

in India, the Director of Resident Instruction should have responsibility for the programmes of undergraduate education with specific responsibilities to be designated by the Academic Council of the University.

In carrying out responsibilities for postgraduate education, the Director of Resident Instruction should be assisted by a Postgraduate Committee. This Committee should meet at least once each trimester.

**Research Programme.** The agricultural university should have the responsibility for conducting the research related to agricultural production and rural development within the State in which it is located. The main research centre should be at the main campus of the university.

There should be a well-developed experiment station of sufficient size to permit high-quality field research in disciplines such as plant breeding, agronomy, soils, horticulture, plant pathology and entomology. The experiment station should also provide facilities for other segments of the university when needed to test a discovery or adaptive innovation under field conditions. The Education Commission in its report of 1964-66 (page 355) suggests that farms around 1,000 acres in size and not less than 500 acres of cultivated area should be attached to each agricultural university. Even 1,000 acres of cultivated area would be below the minimum area required for research and student training at a first-rate agricultural university. The practical training of the undergraduate students in the college of agriculture should consist of participation in the actual farm operation rather than confining them to a small plot of land assigned to their care which does little to teach modern agricultural science or practice.

*Research Substations.* In addition to the main research station, there should be a manageable number of substations strategically located to cover the major agro-climatic regions of the State. Each of these should have sufficient area and a research programme of sufficient magnitude to justify the posting of a number of competent research scientists at each substation. Since these substations may be located in areas where the housing and amenities for comfortable living are not up to the standard of those at the university campus, special attention should be given to the construction of housing and the provision of other amenities for the comfort and well-being of the research staff and supporting personnel.

*Research Staff.* A high proportion of the senior research staff should have postgraduate degrees. These degrees which required a significant research experience as a major qualification for their award provide a special preparation for careers in research.

The academic or professional titles for the research scientists should be comparable to those of the teaching faculty and for administrative convenience may be even the same. Of greater importance, however, is that



the salary range, perquisites and opportunities for advancement be the same as those for equivalent academic ranks on the teaching staff.

*Research Projects.* There is seldom enough money to support all of the research that a good research staff would like to be doing. Therefore, it is necessary to have an effective administrative mechanism to establish priorities, review projects, allocate funds, and coordinate the research work on a university-wide basis. Authority to administer the research programme should be vested in the Director of Research who reports directly to the Vice-Chancellor. To assist the Director in carrying out his duties there should be a university-wide Research Advisory Committee and college-based Projects Review Committees.

In the selection of research projects those which are designed to provide new information needed to solve problems of immediate concern to the rural community should be given priority. Of these, those which are likely to result in an increase in the production of food should have first priority. Although it is important that priorities be established and the effort concentrated in the more important areas, the coverage should be reasonably complete and some attention should be given to basic research, particularly of a kind that might lead to an early agricultural application.

A strong research programme is the foundation for a strong programme in postgraduate education. Therefore, there needs to be close liaison between the administrations of research and postgraduate studies. This liaison may be accomplished by the collaboration of the Deans of the Colleges with the Directors of Research and Resident Instruction in the coordination of postgraduate student research and its integration with the general research programme of the university.

*Standard of Research.* Too thin a deployment of research staff, absence of competitiveness amongst research workers, want of identification of the problem in the field, and lack of collaboration and cooperation between the scientists working on the same problem, as well as with those in the related fields have been the common failings in research.

The planning of a coordinated project with team work, frequent reviewing of progress of the research project by the research committees of the college and the university, and presentation of the project before the inter-institutional workshops and seminars, where peers in the profession can comment, are the devices for maintaining a high standard of research.

The scope and depth of coverage of the research programme of an agricultural university can be judged by a topical review of the research projects under way. The productivity can be measured by the number of published research reports, and finally the significance of the research programme can be evaluated on the basis of the new varieties developed

which readily find widespread adoption, the agronomic and cultural innovations that are readily taken up by the farmers, the advances in mechanization that can be traced to the laboratories of the agricultural engineers and the modifications of practices, processes and procedures which have resulted from studies in farm economics and farm management. In short the success of an agricultural university is measured in terms of the agricultural development it has catalyzed in the State and in the nation. There is always a lag between the laboratory and the field and some time is expected to elapse before the results of research begin to make an impact on the agricultural community, but ultimately the impact must be there else the university has failed in its mission.

**Extension Programme.** In an agricultural university there is little point to developing scholarship and research unless the results of these activities can be put to use in service to the public. In fact, an effective mechanism to extend the results of research and scholarship to the grass roots level is just as essential and as important a function of an agricultural university as research or resident instruction. In other words an effective extension directorate is an essential component of an agricultural university.

The university has two rather distinct functions in the development of an extension education programme. First, it is obliged to train extension workers. This is usually accomplished by including one or more courses in extension education or extension methodology including communication in the course programme of the B.Sc. student. This part of the university's responsibility is usually assigned to the Department of Extension Education in the College of Agriculture. Secondly, the agricultural university must deploy a field operation to carry the results of research and innovation to the field and devise appropriate and effective means for obtaining their adoption. This operation usually falls under the purview of the Extension Director of the university. The scope of activity includes the preparation and distribution of extension type publications in the local language; agricultural programmes for radio broadcast; the planning and conduct of field demonstrations; the planning and conduct of field days, short courses, and the demonstrations of techniques, machines and innovations, etc. Some of these activities are carried out at the main campus of the university and others are carried out at distant points in the State in order that the farmers of the entire State may be reached. Many of these projects are carried out with the cooperation of the research staff so that the full force of the latest research results may be incorporated.

The report of the Education Commission 1964-66 (page 362) indicates three main changes that need to be brought about if agricultural extension is to succeed: (1) the upgrading of the skills of extension workers; (2) the separation of extension work proper from the supply services of the department of agriculture; and (3) the attachment of extension workers to



research departments or demonstration farms, so that the latest in research results are available to them and they can teach by example rather than by precept.

Another advantage of having the extension workers attached to the research department is that through their observations in the field they are able to call to the attention of the research staff, problems that should be researched and the solutions carried back to the field. In this way the research programme can constantly be directed to solving the problems of the rural areas.

Because of the importance of the supplies, services, and control functions of the Department of Agriculture in the overall programme of agricultural development there should be close cooperation between the agricultural university and the state department of Agriculture in developing an effective extension programme. There should be a memorandum of agreement between the university and the department which spells out in detail the responsibilities and functions of the Extension Directorate on one hand and the State Department of Agriculture on the other. This memorandum should delineate the methods for coordinating the programmes of the two agencies in the common cause of rural development.

Similar memoranda need to be developed with the Departments of Animal Husbandry, Development, Cooperative and such other agencies of government that can mutually benefit by a cooperative educational programme.

*Standards of Extension.* The effectiveness of extension education can be assessed by determining (a) the willingness of the farmers to listen to the university and, (b) how far the voice of the university reaches. The extension education programmes should cater to the needs of the rural men, women and youth and focus on common farm and home-production enterprises.

Training programmes for extension field personnel and short courses for adults should involve all the departments in the colleges of agriculture, veterinary medicine, home science, agricultural engineering and several from the college of basic sciences and humanities. Skilled extension education workers will involve many departments as well as a number of segments of rural populations in their programmes and will continuously search for new and better methods of communication.

The impact of the extension education programme on the agricultural production and rural countryside depends not only upon the skills of the extension workers, and the innovativeness of the university's research staff but also upon the responsiveness of the rural population and strength of supporting agencies like input services, departments of agriculture, animal husbandry, cooperation and community development. With the same staff the impact will vary from area to area depending upon natural and socio-

economic conditions. The extension education programmes are to be judged on the basis of the efforts and skills of the university personnel and the degree of interest which they are able to evoke in the farming community as well as by the evidence in the farmers' fields.

**The Library.** The university library provides the life blood of research and academic scholarship. As such, a library cannot be merely a book warehouse, but must also be a dynamic force in stimulating scholarship and research competence. The library holds a unique position in that it contributes to the academic excellence and research competence of all segments of the university's academic structure. The importance of the library and its services to the academic community justifies priority consideration in the allocation of funds and personnel resources for its growth and services.

The library through its services should: (1) encourage the students and faculty to develop the habit of reading the literature and keeping abreast of the latest advancements in their fields of specialization; (2) enable the staff to publish their research data with due consideration of the work of others engaged in similar research elsewhere; and (3) contribute greatly to the success of an educational programme in which the students are examined internally.

The needs for library development recommended in the Second Workshop on Agricultural Universities may be found on pages 67-68 of the proceedings. These proceedings should be referred to particularly as regards general policy and staffing recommendations. The discussion here will be concerned more particularly with some of the essential elements of an effective library service.

First there should be a full-time trained librarian who should be a member of the university faculty. The university librarian should have general overall supervision of the university library and library personnel including all libraries of constituent colleges, departmental collections and the working collections of the research substations.

There should be a University Library Committee. This Committee should consist of responsible faculty and administrative personnel. The committee should be representative of the faculty and the University Librarian should serve as convenor. The University Library Committee should be responsible for establishing library policy and dealing with all matters brought to its attention by the University Librarian. This Committee should work with the Librarian in the development of the library budget, screening requests for library acquisitions and the development of building and service programmes to enhance the usefulness of the library for students and faculty.

The University Librarian should be responsible for initiating purchase requests, receiving, accessioning, indexing and maintaining a card index



of all library materials for the entire university. He should be authorized to renew without lapse all scientific journal subscriptions.

Special arrangements should be made to meet the library needs of the research personnel posted at off-campus points such as regional research substations. No effort should be spared to facilitate the circulation of newly acquired books and journals in their special subject matter fields to them.

The librarian should issue regular lists of library materials received on a monthly basis, and should arrange programmes and other devices to attract readers from among the student body and faculty. Loan procedures and regulations that will encourage library use with reasonable security should be arranged. If a library is not being used it is not serving a useful purpose. Until such time as text-books are readily available at costs students can afford, the university library should have some plan for supplying text-books on a loan or rental basis.

In an educational programme based on an internal examination system it is necessary that students be encouraged to develop reading and self-study habits. An effective library service is a key factor in stimulating the development of these habits. The hours during which the library is kept open is an important consideration when evaluating its usefulness to students and staff. If the library is open only during the hours when the classes are being held its use by students will be sharply limited since most of them will be occupied with classroom instruction during these hours. Therefore, library hours should be extended into the evening and on Sundays and holidays.

It has already been indicated that the library should receive priority consideration in the allocation of resources for its development. The rate and constancy of growth in library holdings and services is a better index of the progress being made in university development than the size of the holdings.

**The Spirit and Doctrine.** Aside from the aspects of the university that can be enumerated, seen or evaluated in a physical sense, there are other qualities of equal or even greater importance which are not so easily detected and evaluated. These relate to the philosophy of purpose, the dedication to service, the attitude towards the work, the pride in accomplishment, and the spirit of cooperation between faculty members and between faculty and administrators. These are important characteristics that can only be measured by association and intuitive perception. Yet the success of the university may in a large measure depend upon them.

The institution's concept of its role in society, the service orientation of its administration and faculty, the motivation and incentive of individual staff members, the bonds of common purpose between faculty and students

in the solution of problems, and the dedication to service are among the criteria for the measurement of developmental progress.

In a democracy, the institution of higher education should be the stronghold of democratic principles. The principles of democracy should not only be taught but also painstakingly practised in the day to day operation of the institution. The faculty should be fairly and adequately represented on councils, boards and committees. Students should be represented on committees concerned with student affairs.

There should be well-defined and clearly understood channels of communication. For example, the Dean is the chief administrative officer of the college and as such is the representative of the university administration in the college, similarly he represents the college in all matters concerning the college when being considered in discussions at an inter-college or university level. The Dean of the College should be consulted on all matters concerning the faculty of this college. Similarly the Department Head represents the college administration in the department and represents the members of his departmental faculty in the college. In instances where there are coordinating officers such as directors of research, extension and resident instruction, both the Dean and Department Head should sit with them or be consulted by them concerning matters in which faculty members of a department are involved or concerned.

For effective operation of colleges, departments, and faculties the provision of adequate space for offices, classrooms and teaching and research laboratories is essential. Space assignments should be arranged, in so far as possible, to give identity to colleges and departments. Departments with common interest or extensive collaborative programmes should be housed close together to encourage the interchange of ideas and frequent discussions of problems of mutual interest.



## CHAPTER 3

# Assessment Methods and Procedures

### Introduction

The institution-building framework sets forth the two broad categories of institution variables and environmental linkages (Chapter 1). The importance of the relationships between an agricultural university and its environment cannot be over-emphasized. The process of assessing progress of an agricultural university can be carried out with this framework guiding the analysis at all stages. It serves as a broad guide to the important institutional and environmental characteristics to study. It suggests data needs and sources. It serves as a model for those making the assessment in exercising the judgements to be made on both the tangibles and intangibles involved in a complex educational institution which must both serve and draw resources from its environment.

The special and essential features of an agricultural university that were set forth in Chapter 2 also provide background for evaluation of an individual university. The following is an outline of methods and procedures to be followed in assessing progress of an agricultural university.

### Information and Sources

The information needed must be drawn from many sources and is both quantitative and qualitative in nature. The instruments to be used in collecting data are shown in the Appendix. Some modifications may be required to accommodate the unique features of a particular institution. Additional experience in the use of instruments will undoubtedly lead to improvements. Nevertheless, they have proved to be effective in an in-depth assessment of progress of an agricultural university.<sup>1</sup> The instruments that have been modified on the basis of this experience will serve as a sound approach to data collection for a similar exercise at other agricultural universities in India, and other countries as well.

**Reports and Other Publications.** Reports of the University under study are important sources of information on university development, history, programmes, internal structure, sources and amounts of resources, and services. They are also likely to provide information on enabling and functional linkages. The following are types of reports that are useful:

---

<sup>1</sup> See the companion report to this one, "*The Punjab Agricultural University, An Assessment of Progress to 1970*".

University Acts and Statutes, annual reports, resident instruction bulletins, the prospectus for students, research reports, extension education publications, and reports of university conferences and workshops. Each university will have other reports that will be useful, some of which will not be formally printed. For example, information may have been compiled for preparation of history of the university.

In addition to supplying information on the current status of the university, reports will provide the assessment team with a historical perspective of the university under study. The procedure being described is intended for use in assessing university capability to meet *present and future* needs; nevertheless, this assessment must be made with an understanding of the process of growth of the university to date.

**Questionnaires and Interviews.** A combination of questionnaires and interviews are to be used in collecting information regarding departments, colleges, the research and extension directorates, and the university library. The questionnaires are to be completed by the administrator responsible for the administrative unit. Following completion of the questionnaire, study by all members of the assessment team, and identification of specific points to be discussed with the questionnaire respondent, a discussion is held with him. The points to be discussed form the basis for the "purposive interview"; however, the interview should not be highly structured providing opportunity to pursue points that may arise in the discussions that should be as informal as is possible. The length of the discussion will vary from one administrative unit to another; however, experience indicates that interviews should not extend for longer than one hour. A minimum of two members of the assessment team should participate in each interview to provide collective judgements on the many intangibles involved in the effective organization and functioning of an agricultural university.

*Department Head Questionnaire and Interview.* The Department Head questionnaire (Appendix, Exhibit A) is designed to provide information on the following: department objectives; financial, personnel, and physical resources; programmes and their contributions; strengths and weaknesses in sub-disciplines; integration of teaching, research and extension at the department and individual staff member levels; internal organization, administration, and communication; activities contributing to improvement of the department; relationships with other university administrative units; and linkages with other organizations.

The interview of the Department Head provides information supplementary to that in the questionnaire. To provide focus to the interviews and uniformity of approach among assessment team members, a series of key questions are discussed and answered following each department head interview (Appendix, Exhibit B). This technique is a means of developing consensus on key questions and provides information in a



concise form needed in preparing brief department summaries for the report.

*College Dean Questionnaire and Interview.* The College Dean questionnaire (Appendix, Exhibit C) provides information on: college objectives; financial resources; programmes with emphasis on undergraduate students and employment of graduates; relative strength of departments within the college; administrative relationships with departments, other colleges, and university-level offices; programmes for improvement of teaching; and organizational linkages.

The interview of the College Dean serves the same general purpose as the Department Head interview outlined above.

*Research and Extension Director Questionnaires and Interviews.* The key role of research and extension directorates in agricultural universities demands that special questionnaires be designed to collect information on the functions performed by these offices. The Director of Research questionnaire (Appendix, Exhibit D) and Director of Extension questionnaire (Appendix, Exhibit E) add to the information on research and extension education obtained from Department Head and College Dean questionnaires and give an overview of organization, administration and university-wide accomplishments of these programmes. Specifically, the questionnaires are designed to provide information on the relationship of the directorates to other university-level offices and bodies, colleges, and departments; the resources, with emphasis on personnel quantity and quality; integration of research, teaching, and extension; programme strengths and weaknesses; programme coordination; and project and programme review procedures. In the case of research, relationships to other research organization and funding agencies is of particular concern. With extension, the organization and methods of disseminating information and the linkages with the environment are of special importance.

The interviews of Directors of Research and Extension after the assessment team members have studied the information supplied are conducted in a manner similar to Department Head and College Dean interviews. These two interviews should follow visits by team members to the main research station and substations and visits to observe extension education activities in the field.

*Librarian Questionnaire and Interview.* The important role of the university library demands special attention in the assessment of university library capability. The Library questionnaire (Appendix, Exhibit F) supplies information on library volume and seating capacity; growth in resources and services; means of encouraging faculty and student use of the library; and administrative relationships of the library to departments and colleges. After the librarian has completed the questionnaire he is

interviewed at which time the assessment team should view the facilities and equipment of the library. In addition, several visits should be made to the library at different times of the day and week to observe the use of the library by faculty and students.

**Interview of Officers.** All university officers who do not complete questionnaires should be interviewed. This will include the Vice-Chancellor, Registrar, Comptroller, Estate Officer, Director of Students' Welfare, and Dean of Postgraduate Studies. Prior to interview of each person, the assessment team should develop a list of topics to be discussed. These will centre around the special responsibilities of each officer. Some questions will be suggested by information received from questionnaires and interviews of Deans of Colleges, Heads of Departments, Directors of Research and Extension, and the Librarian; thus these interviews should follow interview of those who have completed questionnaires.

Information should be requested and received from certain officers prior to the interview. The Registrar should be asked to supply information on student and staff members and numbers of graduates by years.<sup>1</sup> The Comptroller should be asked to supply two tables of information: one showing the amount of funds available to the university by sources and years and another showing expenditures by years with breakups by colleges and major administrative units and divisions between building and recurrent expenditures. The Estate Officer should be requested to supply a copy of the campus plan and a table showing changes in physical facilities including hostel capacity and occupancy, staff quarters, and space allocations for university administration, colleges, library, medical services, printing services and shopping centre. Facilities for housing special groups such as guest houses and farmers home should also be included. Data should be supplied by two-or three-year intervals during the existence of the new university. Another table should be requested showing buildings under construction, capacity, and expected completion date.

Discussions should be held with representatives of technical assistance institutions, on-and-off-campus. This will include personnel of such organizations as the U.S. Agency for International Development, U.S. Universities, Ford and Rockefeller Foundations, and perhaps others. Representatives should be requested to provide a summary of the financial and other resources that have contributed to university development. Annual and other reports of technical assistance organizations are excellent sources of information on development of the university as well as the particular contribution of the technical assistance projects.

**Faculty and Student Questionnaires.** An in-depth appraisal of an agricultural university cannot be made by limiting information sources to

---

<sup>1</sup> The information may not be readily available from the office of the Registrar requiring that it be obtained from Deans of Colleges and Heads of Departments.



printed material and administrative officers. The ideas of faculty members and students are helpful in assessing adequacy of certain programmes and activities and in judging the degree of consensus on important questions. Specially designed questionnaires are to be used as data collection instruments.

*Faculty Questionnaire.* The Faculty questionnaire (Appendix, Exhibit G) is to be completed by non-administrative faculty members in the ranks of lecturers through professor. The objective is to get a cross-sectional view of the faculty. This could be done with a sample stratified by academic ranks and colleges; however sending a questionnaire to each faculty member has certain advantages and is recommended. It gives each person an opportunity to express his ideas and to participate in the University's assessment.

The Faculty questionnaire serves as the source of information on the following: faculty membership and participation in professional societies; programme contributions; limitations on individual effectiveness; linkages to State and Central organizations; and faculty attitude and opinions on such matters as the trimester system, internal evaluation, practical training, quality of students and employment of graduates, adequacy of facilities and services, co-curricular programmes, faculty voice in academic affairs, and rewards and incentives.

Experience in use of this questionnaire indicates that the average time taken to complete it is about 45 minutes with many completing it in less than 30 minutes and a few taking as much as one and one-half hours.

*Student Questionnaire.* The Student questionnaire (Appendix, Exhibit H) is to be completed by a sample of students in each college and should include both undergraduate and postgraduate students. While there would be some advantages in giving each student the opportunity to respond, the large number of questionnaires is likely to provide more data than can be summarized with the limited time and personnel available. A total number of 250 returned student questionnaires is adequate with a minimum of 25 from each college and at least 50 from postgraduate students. In a university with a large number of students, respondents may be limited to those who have been in residence for more than two years.

The student questionnaire is designed to obtain information from students on use of their time and study materials; library, classroom, and laboratory facilities; the faculty advisory system; attitudes on examinations and grading; the athletic and co-curricular programmes; hostels and messing; medical services; and the general campus environment.

The average time required to complete this questionnaire will be about 35 minutes with a few students taking an hour or somewhat more to

complete the task. The response from students will vary from university to university but can be estimated to be about 50 per cent.

**The Questionnaire and Interview Schedule.** Prior to beginning the university assessment, all university-level officers, Deans of colleges, and Heads of Departments should be informed of the objectives of the evaluation and the general procedures to be followed. It is to be emphasized that the general objective is to discover means of attaining still greater growth of the university; that it is not an evaluation of the performance of any individual. The questionnaire and interview information should be supplied directly to the assessment team and is to be available only to members. Faculty members and students need not place names or signatures on questionnaires.

It may be advisable for the assessment team to have a brief meeting, called by the University Vice-Chancellor, with university officers, Deans, and Department Heads, to inform them of objectives and procedures. A letter from the Vice-Chancellor may be sufficient. Key administrators should be requested to inform faculty members and students.

The several questionnaires should be duplicated in sufficient quantity and distributed at about the same time, that is within a period of about one week. Each one should be sent directly to the individual who is to complete it with an envelope addressed to the assessment team in which the completed questionnaire is to be returned. This will necessitate compiling lists of names of administrators, faculty members, and students.

The interviews of university officers, Deans, and Department Heads should be held within two weeks of the time questionnaires are returned to the assessment team. As the discipline-oriented Department is the basic administrative unit of the agricultural university, the Department Head interviews should be conducted first, then the College Dean interviews, to be followed by university officer interviews. This permits discussions at higher administrative levels of points that arise out of the lower-level questionnaires and interviews. It is also helpful to the assessment team to have faculty and student questionnaires summarized prior to interview of university-level officers.

**Observations of Campus Activities.** The assessment team can gain many valuable impressions and insights and a "feel" of the spirit, morale, and enthusiasm of a university by being ever-alert to what is occurring on campus. Informal discussions with administrators, faculty, and students are the source of information that can be a significant supplement to other sources. No invitation to attend a student - or faculty - organized social, cultural, or co-curricular function should be declined. Opportunities should also be taken to observe student participation in practical training programmes, classes, and laboratories and the part taken by faculty members.



The team should pay particular attention to on-campus activities that are indicators of services rendered by the University, the respect held for the institution, and linkages to other institutions. Who comes to the campus and for what purposes? What do they say and do? What do they say to you about services rendered and expected from the university? Short courses for farmers and others, conferences of rural leaders, meetings of professional societies, inter-varsity athletic and co-curricular events, the visit of the Governor or the Chief Minister, conferences being held on campus with agricultural workers of cooperating agencies, visits of women to the College of Home Science, and farmers' days are illustrations of types of activities that should be observed. Indeed, the absence of these also speaks with authority. What does not occur may be as important as what does occur.

**Off-Campus Visits and Interviews.** It is essential that the assessment team members make visits to observe extension activities, study the work of regional research substations, and talk with farmers and rural businessmen about the work of the agricultural university. Discussions with representatives of State Government departments and Central Government research and education organizations provide an external view of the university and basis for judging the effectiveness of functional and normative linkages.

The visits to research substations should follow a thorough examination of the work of the main station at or near the university campus so that judgements regarding the complementarity of the research programmes of the substations can be made. Particular attention should be given to the location of substations to serve the special needs of the agriculture of different agro-climatic areas of the State. Discussions should be held with substation staff members to obtain knowledge of the lines of research, adequacy of land, buildings, laboratories, facilities, libraries, and living conditions and the administrative organization and relationships to on-campus administrative units. Some farms should be visited to seek farmers' views of the work of the substation and its relevance to their problems.

As in the case of visits to research substations, opportunities should be found for observing off-campus extension activities and for visits to farms. These will permit informal discussions with field extension educators and give the opportunity to observe the working relationships with cooperating organizations.

Time limitations are likely to prohibit sufficient field visits to the main agricultural regions of the State to obtain adequate evidence on such questions as the overall effectiveness of the extension education programme, the influence of the research substations, or the regard held for the agricultural university by the several clientele groups to be served. Nevertheless,

the field visits that are possible provide an additional basis for making judgements. The team should also seek out results of studies that may have been conducted or are underway by extension educators, agricultural economists, or rural sociologists to determine the acceptance of university developed innovations by farmers and others. Results of such research may include information and attitudes toward and respect held for the new university by farmers and others.

Discussions with representatives of State and Central Government officials and research and education organizations may include the following as well as others: Departments of Agriculture and Animal Husbandry and possibly Forestry and Fisheries; Cooperative Departments; Agro-Industries Corporations, and marketing federations; State and Central Government research stations located in the State; the Indian Council of Agricultural Research; the Indian Agricultural Research Institute; and the Indian Veterinary Research Institute. At least two members of the assessment team should be involved in each discussion that should be informal, not a highly structured interview. Opportunity should be afforded for the organization representative to make any comments he thinks appropriate regarding the work of the agricultural university. However, prior to each discussion, team members should have identified the relevant topics to be discussed with each person. One member of the team should be identified for each discussion to bear the responsibility for writing a brief summary of the main points brought out in the discussion, with the summary to be written as soon after the discussion as convenient. Most of these discussions can be held within 45 minutes to an hour.

These discussions should be held during the latter part of the data collection phase of the assessment so that team members will have a background of knowledge of the university's history, structure, and programmes.

**Data on the Rural Economy.** The assessment of progress of the agricultural university should be made with knowledge of the area that is being served by the institution. At the very beginning, the assistance of university faculty members should be enlisted to assemble information on the rural economy and changes that have occurred during the period the university has been functioning. Agricultural economists are likely to have data assembled, but extension educators, rural sociologists, home scientists, and others may be helpful. The following are illustrations of types of data: number of farms; crop acreage, production and yields; acres and yields of high-yielding varieties; cropping intensity; fertilizer consumption; extent of irrigation; number of livestock; changes in mechanization; extent of availability and use of credit; value of farm production, total



and per capita; and changes in input supplies, marketing and processing firms.

It is not to be implied that the changes in the rural economy are to be used as a direct measure of the effectiveness of the agricultural university. The agricultural university is only one of the institutions that must function effectively to obtain a viable, rapidly developing rural economy. The concept of linkages of the agricultural university to the other institutions in the environment underscores the importance of this point. However, the nature of the rural society to be served and the feel of its dynamics provide an essential backdrop for an assessment of an agricultural university that, with other institutions, is to serve that society.

### **Analysis and Interpretation of Information**

The data and other information must be assembled and analysed in a way that focusses on the essential elements of an agricultural university and its environment. Questionnaires completed by Department Heads, College Deans, and university-level officers should be carefully studied by team members prior to interviews. The data in the faculty and student questionnaires are to be tabulated. The faculty questionnaires should be tabulated by academic ranks and by colleges; the student questionnaires by undergraduates and post-graduate students. Groups may be combined to obtain university-wide totals and averages. In an agricultural university with a large faculty and student body, tabulation of faculty responses by departments and student responses by colleges is a possibility; however caution should be exercised so that data tabulation and analysis are not overly complex with breakups of respondents into smaller administrative units than is necessary.

Throughout the process of data collection and analysis there should be frequent conferences of assessment team members to exchange views and to develop consensus, particularly on those points on which collective judgements are essential.

### **Report Preparation**

The institution-building framework and the nature of the report to be prepared guide the overall assessment process. Therefore, it is important that a final report outline be developed in the early stages of the assessment. The outline that follows contains suggested chapter headings for the report; the type of subheadings within the chapters are suggested by the report on an agricultural university that is a companion report to this presentation of assessment methods and procedures.

## An Assessment of Progress of

Agricultural University

<i>Chapter No.</i>	<i>Chapter Title</i>
	Summary and Recommendations
1.	A Brief History of—————University.
2.	The Rural Economy served by the University.
3.	University Objectives, Internal Structure, Finances and Personnel
4.	Resident Instruction—Students and Curricula
5.	Resident Instruction—Teaching and Student Evaluation
6.	The Research Programme
7.	The Extension Programme
8.	Integration of Teaching, Research and Extension
9.	The Essential Components, Colleges and Departments
10.	The Library
11.	Students Welfare
12.	Faculty Development, Incentives and Welfare
13.	Communications and Printing
14.	The Physical Plant
15.	Linkages to Other Institutions
16.	The University and Rural Welfare

### The Assessment Team and Supporting Services

The composition of the assessment team, the time needed to complete the task, and the supporting services needed will be influenced by a number of factors: the university under study, the availability of experienced personnel, and the urgency of completing the assessment. The following are recommended guidelines.

*Composition of the Team.* The team should be composed of four persons with experience as agricultural scientists with a minimum of two members, preferably more, experienced in agricultural university development and coordination. One of the team members should have primary responsibility for project organization, supervision of supporting personnel, and data summarization.

*Time Required.* The four team members should spend about nine man-months on the university assessment spread over a period of two and



one-half to three months. At least two members should have full time to devote to the project. All team members should be available for initial planning of the assessment, interview of university administrators and off-campus organization representatives, and for the final stages of report preparation. The assessment could be conducted with somewhat less personnel resources; however, the quality of the work would be impaired.

*Supporting Services.* The team requires two full-time senior scale stenographers throughout the project and a statistical assistant to assist in data collection, summarization and analysis. One of the stenographers should be from within the university being evaluated to gain the benefit of his knowledge of university personnel and procedures. There should be continuity of the same supporting persons throughout the project because of the accumulated knowledge of the project and to eliminate the need to train new persons to meet the special requirements of the assessment process. The team should be provided with a vehicle and driver for use on campus, visits to the State, and for interview of State Government officials, State and Central Government research and education organization representatives, and technical assistance institution personnel.

The team will require office space at the university for itself and supporting personnel. In addition to usual office furniture, it will need two typewriters, a calculating machine, and a file cabinet in which questionnaires and other project documents can be locked and kept.

*Background References.* There are a number of publications that bear on the question of agricultural university development that will provide useful background for an assessment team. Included among them are the following:

- I. L. Baldwin, J. A. Rigney, R. W. Roskelley, and W. N. Thompson, *Building Institutions to Serve Agriculture*, Lafayette, Indiana, Committee on Institutional Cooperation, Purdue University, 1968.
- Esman, Milton J., and Hans C. Blaise, *Institution-Building Research: The Guiding Concepts*, Pittsburgh, University of Pittsburgh Graduate School of Public and International Affairs, 1966.
- Esman, Milton J., *Institution-Building as a Guide to Action*, Conference on Institution Building and Technical Assistance, Washington, D.C. Dec. 4-5, 1969.
- Hannah, H. W., *Resource Book for Rural Universities in the Developing Countries*, Urbana, University of Illinois Press, 1966.
- Hannah, H.W., and Robert R. Caughey, *The Legal Base for Universities in Developing Countries*, Urbana, University of Illinois Press, 1967.
- Holm, Glenn C., *Service-oriented Universities, Their Characteristics and Motivating Forces*, New Delhi, Agricultural Universities Development Division, USAID Mission to India, 1969.

- Indian Council of Agricultural Research, *Report of the Joint Indo-American Team on Agricultural Research and Education*, New Delhi, I.C.A.R., 1955.
- Indian Council of Agricultural Research, *Report of the Second Joint Indo-American Team on Agricultural Education, Research and Extension*, New Delhi, I.C.A.R., 1960.
- Indian Council of Agricultural Research, *Final Report of the I.C.A.R. Institute and Agricultural University Libraries*, New Delhi, I.C.A.R., 1968.
- Ministry of Education, Government of India, *Report of the Education Commission, 1964-66 : Education and National Development*, New Delhi, Government of India Press, 1966.
- Naik, K. C., *A History of Agricultural Universities : Educational, Research and Extension Concepts for Indian Agriculture*, Delhi, Navchetan Press (P) Ltd., 1968.
- Proceedings of the Second Workshop on Agricultural Universities of India*, February 16-19, 1965, Punjab Agricultural University, Ohio State University and U.S. Agency for International Development, 1965.
- Report of the Joint Indo-U.S. Technical Assistance Study Team on Agricultural Universities in India*, New Delhi, 1967.
- Willey, Malcolm M., and J. Arthur Branch, *A Self-Study Manual for Indian Colleges and Universities*, New Delhi, The Ford Foundation, 1968.

### Method, Uses and Limitations

This method for assessing progress of an agricultural university has been developed using one university as a case study to test the effectiveness of the method. However, it has been developed by a team with knowledge of the several agricultural universities in India and experience in university development in several countries. The method is presented with confidence that it has general applicability to agricultural universities. Some modifications of specific procedures will be required in certain cases. For example, a multi-campus university will need study of individual campuses, administrative organization, and relationships to the main campus.

The method is designed to assess the overall progress of a service-oriented university and its relationships to the society to be served. It also provides the basis for assessing relative progress made by different administrative units within the university structure. While the method provides the basis for judgements on the effectiveness of resources available for university development, it is not designed to sort out the specific effects of resources coming from several sources, i.e. State Government, Central Government, technical assistance, sales of farm produce, etc. In a complex



university with integrated functions of teaching, research and extension, it is to be expected that there will be complementary effects of resources from the several sources. Thus, determining precise effects from use of resources flowing from a specific source is neither possible nor logically desirable.

The method and procedures are designed for use by an external assessment team, but the institution-building concepts and the method and procedures, to a large extent, should be useful in internal assessment by the officers and academic leaders of a university. The data requested of Department Heads, Deans and university officers should be readily available on a continuing basis. University leaders should know faculty and student attitudes regarding the programmes and services of the university and seek their suggestions for improvements. With provision for continuing internal assessment with the objective of improving the university and its relationships with the society to be served, the task of an external assessment group would be greatly simplified. Indeed, there might be little need for an external assessment using the method and procedures that have been outlined.





5947

## **A p p e n d i x**





DEPARTMENT HEAD QUESTIONNAIRE

Department\_\_\_\_\_College\_\_\_\_\_

Completed by\_\_\_\_\_Year Dept. established\_\_\_\_\_  
(Name and title)

1. This Department offers teaching programmes at the following levels:

Check "yes" or "no"  
Yes No

Majors at the B.Sc. level \_\_\_\_\_

Service to other colleges/Depts. \_\_\_\_\_

M.Sc. level \_\_\_\_\_

Ph.D. level \_\_\_\_\_

Other, specify\_\_\_\_\_

2. If postgraduate degrees are offered, indicate total capacity and number of students during current year:

Total Total  
capacity number of  
students

M.Sc. level \_\_\_\_\_

Ph.D. level \_\_\_\_\_

3. If M.Sc. or Ph.D. degrees are not offered, indicate anticipated dates for offering degrees:

Year If not in  
forseeable  
future, check

M.Sc. \_\_\_\_\_

Ph.D. \_\_\_\_\_

Exhibit A (Continued)

4. The Department budget for the current year is:

	<i>Salaries</i>	<i>Contingent</i>	<i>Non-</i>	<i>Total</i>
	<i>Rs.</i>	<i>expense</i>	<i>recurring</i>	<i>Rs.</i>
	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>
Teaching	_____	_____	_____	_____
Research	_____	_____	_____	_____
Extension	_____	_____	_____	_____
Other	_____	_____	_____	_____
Total	_____	_____	_____	_____

5. What is the Department annual contingent expense per student at present and needed?

	<i>Current year</i>	<i>Needed</i>
	<i>Rs.</i>	<i>Rs.</i>
Per undergraduate student	_____	_____
Per postgraduate student	_____	_____

6. Department staff, sanctioned and in position, at this time:

	<i>Number</i>	
	<i>Sanctioned</i>	<i>In position</i>
Professor or equivalent	_____	_____
Associate Professor or equivalent	_____	_____
Assistant Professor or equivalent	_____	_____
Lecturer or equivalent	_____	_____
Sub-total (Professors-Lecturers)	( _____ )	( _____ )
Research Assistant or equivalent	_____	_____
Total (Professors-Assistants)	_____	_____



Exhibit A (*Continued*)

7. Numbers and combinations of duties of Department staff members at this time:

*No. of  
staff*

Professor through Lecturer (or equivalent)

Teaching only	_____
Research only	_____
Extension only	_____
Teaching and Research	_____
Teaching and Extension	_____
Research and Extension	_____
Teaching, Research and Extension	_____
Total (Professors through Lecturers)	<u>          </u>

8. How many new professional staff members have joined the Department in the last 3 years? \_\_\_\_\_. How many have left the Department in the last 3 years? \_\_\_\_\_.
9. Indicate the names, ranks and location of staff members now on leave for advanced training:

	<i>Name</i>	<i>Location</i>	<i>Type of training</i>
(a)	_____	_____	_____
(b)	_____	_____	_____
(c)	_____	_____	_____

10. For the Department indicate the space assigned, space used, present and future needs (in square metres):

<i>Space use</i>	<i>Now assigned</i>	<i>Now used</i>	<i>Total needs</i>		
			<i>Now</i>	<i>In 3 yrs</i>	<i>In 6 yrs</i>
Laboratories					
Class & Seminar rooms					
Library & Museum					
Offices					
Stores					
Other					

11. What space and facilities are shared by the Department with other Departments? \_\_\_\_\_

12. Indicate current research land assigned to the Department, acres now used, and total acres needed in 3 years and 6 years:

	<i>On Campus (acres)</i>	<i>Off-Campus Research Stations (acres)</i>
Now assigned	_____	_____
Now used	_____	_____
Now urgently needed (additional)	_____	_____
Total needs in 3 years	_____	_____
Total needs in 6 years	_____	_____



Exhibit A (*Continued*)

13. If the Department has responsibility for an off-campus research station or substation, indicate which ones:

	<i>Name of Station/Substation</i>	<i>Location</i>
(a)	_____	_____
(b)	_____	_____
(c)	_____	_____

14. How is responsibility and authority shared with the person directly in charge of the research station?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

15. What is the administrative relationship of the Department to work on other campuses of the University?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

16. What are the objectives of the Department?

A. In the teaching and research programme of the University:

(1) \_\_\_\_\_

(2) \_\_\_\_\_

(3) \_\_\_\_\_

(4) \_\_\_\_\_

(5) \_\_\_\_\_

## Exhibit A (Continued)

B. In extension education and other services to the rural economy:

- (1) \_\_\_\_\_
- (2) \_\_\_\_\_
- (3) \_\_\_\_\_
- (4) \_\_\_\_\_
- (5) \_\_\_\_\_

17. List the sub-disciplines (or areas of work) that should be included in the Department for it to adequately contribute to university goals. To what degree are current programmes, personnel and financial resources adequate? (Include *both* sub-disciplines now included as well as additional ones that should be included.)

[illegible]



Exhibit A (*Continued*)

18. What are the most critical factors limiting growth of the Department?
- (a) \_\_\_\_\_
- (b) \_\_\_\_\_
- (c) \_\_\_\_\_
19. What specific measures will be taken within the coming year to alleviate the impediments to growth indicated above?
- (a) \_\_\_\_\_
- (b) \_\_\_\_\_
- (c) \_\_\_\_\_
20. List the important accepted innovations developed by the Department in the past *three* years (indicate extent of acceptance): Attach sheet if necessary.

A. <i>Innovations accepted by farmers</i> <sup>1</sup>	<i>Extent of acceptance</i>
(1) _____	_____
(2) _____	_____
(3) _____	_____
(4) _____	_____

<sup>1</sup>Home Scientists respond in terms of innovations accepted by rural women.

B. <i>Innovations accepted by input suppliers and marketing firms</i>	<i>Extent of acceptance</i>
(1) _____	_____
(2) _____	_____
(3) _____	_____
(4) _____	_____

Exhibit A (Continued)

C. <i>Innovations accepted by other research and education and Government institutions</i>		<i>Extent of acceptance</i>
(1)	_____	_____
(2)	_____	_____
(3)	_____	_____
(4)	_____	_____

21. What relationships (formal and informal) does the Department have with other organizations (briefly describe relationship)?

A. Other agricultural universities: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

B. Other colleges and universities: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

C. Professional societies: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

D. Input supply firms and organizations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

E. Marketing firms and organizations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Exhibit A (*Continued*)

F. State Government departments (agriculture, animal husbandry, community development, cooperative, etc.): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

G. Central Government research institutions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

H. Indian Council of Agricultural Research: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I. Central Government Ministries: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

J. Leading farmers in the State: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

K. Ford, Rockefeller and other foundations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

L. Foreign government technical assistance agencies: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

M. Others that are considered important (specify): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

22. How have relationships with other organizations and groups been strengthened in the past two years?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

23. What specific measures has the Department taken to improve its image amongst the other universities?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

24. Have authority and responsibility been properly delegated to the Department by the university and college level officers?  
Yes\_\_\_\_\_No\_\_\_\_\_. If “no” what improvements are needed?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Exhibit A (*Continued*)

25. Does the Department have sufficient flexibility in organization and functioning with protection against centralised control or domination?

Yes———No———. If “no” specify deficiencies, with examples:

---



---



---

26. Do you have equal responsibility for teaching, research and extension within your academic discipline? Yes———No———.

If “no” should you have? Yes———No———.

Comments: —————

---



---

27. What specific measures has the Department taken within the past year to improve the library collection and services?

(a) —————

---

(b) —————

---

(c) —————

---

Exhibit A (*Continued*)

28. What specific measures has the Department taken within the past year to improve teaching and grading?

(a) \_\_\_\_\_

\_\_\_\_\_

(b) \_\_\_\_\_

\_\_\_\_\_

(c) \_\_\_\_\_

\_\_\_\_\_

29. What improvements are needed in collaboration and communication of staff members with other departments and other university authorities and bodies? Be as specific as you can:

(a) \_\_\_\_\_

\_\_\_\_\_

(b) \_\_\_\_\_

\_\_\_\_\_

(c) \_\_\_\_\_

\_\_\_\_\_

30. What excellence-recognition programmes for staff and students does the Department have?

(a) \_\_\_\_\_

\_\_\_\_\_

(b) \_\_\_\_\_

\_\_\_\_\_

(c) \_\_\_\_\_

\_\_\_\_\_



Exhibit A (*Continued*)

31. List the specific activities of the Department within the past three years to improve the quality of classroom and laboratory teaching:

(a) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(b) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(c) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(d) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(e) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

32. What personnel improvement programmes does the Department have in the areas of:

(a) Teaching? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Exhibit A (Continued)

- (b) Research? \_\_\_\_\_  
\_\_\_\_\_
- (c) Extension? \_\_\_\_\_  
\_\_\_\_\_
- (d) Non-professional personnel? \_\_\_\_\_  
\_\_\_\_\_

33. List the university departments with which your Department has joint research projects:

	<i>Departments</i>	<i>Number of joint research projects</i>
(a)	_____	_____
(b)	_____	_____
(c)	_____	_____
(d)	_____	_____
(e)	_____	_____

34. Give a brief statement of your philosophy or doctrine with respect to human resource management to attain Department goals:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Exhibit A (Continued)

35. List the committees in the Department, the *number* of staff members on each committee by rank (indicate by \* rank of person now serving as Chairman), and the number of meetings held during the past year:

Name of Committee	Committee membership <sup>1</sup>					No. of meetings
	Head	Prof.	Assoc. Prof.	Asst. Prof.	Lecturer	
EXAMPLE Committee on Courses	—	1*	1	2	1	3
(a)						
(b)						
(c)						
(d)						
(e)						
(f)						
(g)						
(h)						

<sup>1</sup>Include equivalent research and extension ranks.

36. How many times per year does the Department staff have meetings?\_\_\_\_\_.

37. Does the Department prepare a circular to inform staff members of department plans, activities, and accomplishments?

Yes\_\_\_\_\_No\_\_\_\_\_. If “yes” how often? \_\_\_\_\_

(Attach copy of circular to this questionnaire)

Exhibit A (*Continued*)

38. How does the productivity and stature of the Department compare with similar departments in other universities and research institutes in the country (be as specific as possible)?

---



---



---



---



---

39. Publications of Department staff (year just ended).

*Attach list* classified as follows:

A. *Research Publications:*

- (1) University Journal of Research.
- (2) Scientific journals, Indian journals.
- (3) Scientific journals, published in other countries.
- (4) Books reporting on research.
- (5) Professional and scientific papers (unpublished).

B. *Extension Publications:*

- (1) Extension bulletins.
- (2) Extension circulars.
- (3) Extension leaflets
- (4) Popular articles, university publications.
- (5) Popular articles, trade journals.
- (6) Popular articles, other.
- (7) News bulletins.
- (8) Radio tapes.



Exhibit A (*Continued*)C. *Teaching Publications:*

- (1) Textbooks.
- (2) Laboratory manuals.
- (3) Cyclostyled materials for student use in library.
- (4) Cyclostyled materials for all students in a course.

D. *Miscellaneous and other:*

(List and indicate length in pages, method of reproduction, and brief description of use).

DEPARTMENT GENERAL ASSESSMENT

*(Form is to be completed by Team Representatives immediately following discussion with Department Head.)*

Department\_\_\_\_\_College\_\_\_\_\_

1. What are the main purposes of this Department? (Primarily teaching service? Research? Teaching? Extension? Combinations?)

\_\_\_\_\_  
\_\_\_\_\_

2. Is this Department an essential component of an agricultural university? Yes\_\_\_\_\_No.\_\_\_\_\_ Comments:\_\_\_\_\_

\_\_\_\_\_

3. Are the essential sub-disciplines represented in the Department? Yes\_\_\_\_\_No\_\_\_\_\_. Are there some that are not essential? Yes\_\_\_\_\_No\_\_\_\_\_. What are strengths, weaknesses, and non-essential areas? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

4. Does this Department have the necessary strength and depth of leadership to sustain its growth (assuming a reasonable degree of financial support)? Yes\_\_\_\_\_No\_\_\_\_\_. Comments:\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Exhibit B (*Continued*)

5. Are the financial and personnel resources adequate to permit growth into needed areas of service? Yes-----No----- . Comments:  
 -----  
 -----
6. Are the internal organization, delegation of responsibility and authority, and recognition of achievements conducive to initiative and innovation? Yes-----No----- . Comments:-----  
 -----  
 -----
7. Has the Department developed the essential linkages with other units of the university? On campus? Yes-----No-----; Off campus (other campuses, research stations, etc.)? Yes-----No----- . Indicate strength and weaknesses:  
 -----  
 -----
8. Has this Department developed the essential linkages with other organizations? Yes----- No.----- . If "no" indicate needs:  
 -----  
 -----
9. Is there evidence that the Department is having an impact on agricultural production and/or efficiency and rural welfare? Yes-----No----- . Cite examples of evidence: -----  
 -----  
 -----



Exhibit B (*Continued*)

10. How does the Department rank among similar departments in the country? Highly regarded-----; Well regarded-----; Not highly regarded-----. Give evidence and reasons: -----

11. General evaluation of Department: Outstanding-----; Excellent-----; Good-----; Fair-----; Poor-----. Comments: -----

Date: -----Interviewers -----

COLLEGE DEAN QUESTIONNAIRES

College \_\_\_\_\_ Year Established \_\_\_\_\_

Questionnaire completed by \_\_\_\_\_  
( name and title)

1. Number of students enrolled in degree programmes by classes, at the end of the last registration period which was \_\_\_\_\_  
(date)

*Undergraduates*

*Number*

1st Year \_\_\_\_\_

2nd Year \_\_\_\_\_

3rd Year \_\_\_\_\_

4th Year \_\_\_\_\_

5th Year \_\_\_\_\_

Special courses \_\_\_\_\_

Sub-total undergraduates ( \_\_\_\_\_ )

*Postgraduates*

M.Sc. \_\_\_\_\_

Ph.D. \_\_\_\_\_

Sub-total postgraduates ( \_\_\_\_\_ )

TOTAL STUDENTS \_\_\_\_\_

Exhibit C (Continued)

2. Applicants and admissions, undergraduate curricula by years.

<i>Academic Year</i>	<i>Curriculum:</i>			<i>Curriculum:</i>		
	<i>Applicants</i>	<i>Admitted</i>	<i>Admitted</i>	<i>Applicants</i>	<i>Admitted</i>	<i>Admitted</i>
	( <i>No.</i> )	( <i>No.</i> )	( <i>%</i> )	( <i>No.</i> )	( <i>No.</i> )	( <i>%</i> )
19—	_____	_____	_____	_____	_____	_____
19—	_____	_____	_____	_____	_____	_____
19—	_____	_____	_____	_____	_____	_____
19—	_____	_____	_____	_____	_____	_____
19—	_____	_____	_____	_____	_____	_____
19—	_____	_____	_____	_____	_____	_____

3. Number of graduates of the College by years:

<i>Academic year</i>	<i>Degree</i>			
	<i>B.Sc.</i>	<i>M.Sc.</i>	<i>Ph.D.</i>	<i>Other</i>
19—	_____	_____	_____	_____
19—	_____	_____	_____	_____
19—	_____	_____	_____	_____
19—	_____	_____	_____	_____
19—	_____	_____	_____	_____



## Exhibit C (Continued)

4. Number of undergraduate students admitted, rural and urban, by years.

<i>Academic Year</i>	<i>Number admitted</i>	<i>Number rural</i>	<i>Number urban</i>	<i>Per cent rural</i>
19—	—	—	—	—
19—	—	—	—	—
19—	—	—	—	—
19—	—	—	—	—
19—	—	—	—	—
19—	—	—	—	—
19—	—	—	—	—
19—	—	—	—	—

5. Total students in College and number receiving scholarships and other financial assistance<sup>1</sup> by years.

<i>Academic Year</i>	<i>Amount Rs.</i>	<i>Total students in College</i>				<i>Students receiving assistance</i>			
		<i>B.Sc.</i>	<i>M.Sc.</i>	<i>Ph.D.</i>	<i>Total</i>	<i>B.Sc.</i>	<i>M.Sc.</i>	<i>Ph.D.</i>	<i>Total</i>
19—	—	—	—	—	—	—	—	—	—
19—	—	—	—	—	—	—	—	—	—
19—	—	—	—	—	—	—	—	—	—
19—	—	—	—	—	—	—	—	—	—
19—	—	—	—	—	—	—	—	—	—
19—	—	—	—	—	—	—	—	—	—
19—	—	—	—	—	—	—	—	—	—
19—	—	—	—	—	—	—	—	—	—

<sup>1</sup>Includes scholarships, fellowships, stipends, students aid fund, loans and fee concessions.

Exhibit C (*Continued*)

## 6. Employment of B.Sc. Graduates of the past two years.

<i>Employment</i>	<i>Graduate of</i>	
	<i>19— (number)</i>	<i>19— (number)</i>
Postgraduate study, this university	_____	_____
Postgraduate study, other universities	_____	_____
Extension education, this university	_____	_____
State Department of Agriculture	_____	_____
State Department of Animal Husbandry	_____	_____
Other State Departments	_____	_____
Central Government	_____	_____
Farming	_____	_____
Farm input supply organizations	_____	_____
Banks and other credit organizations	_____	_____
Marketing and processing organizations	_____	_____
Primary, secondary, technical schools	_____	_____
Veterinary service organizations	_____	_____
Other (specify) _____	_____	_____
Unemployed	_____	_____
Employment unknown	_____	_____
Number of graduates	_____	_____

## 7. Does the College have an up-to-date file of the address and employment of each of its graduates? Yes—— No——.

Exhibit C (*Continued*)

8. Is there an organization of the graduates of the College? Yes———  
No———.

If "yes" briefly describe organization, its membership, and purposes:

---

---

---

9. Does the College have a student placement service? Yes———  
No———. If "yes" briefly describe service: —————

---

---

---

---

10. Does the University have a placement service. Yes——— No———.   
If "yes", what is the relationship of this service to the College?

---

---

---

11. How is the number of students admitted related to anticipated employment opportunities? —————

---

---

---

---



- Total Rs. \_\_\_\_\_

- 
- 
- 
- 

- [illegible]

Exhibit C (*Continued*)

15. Should the College have additional Departments? Yes————  
No.———. If “yes” specify additional needs: —————

---

---

---

16. Are there divisions or different combinations of Departments that should be made? Yes—————No———. If “yes” specify changes needed: —————

---

---

---

17. What is the administrative relationship of the College to work on other campuses of the University?—————

---

---

---

18. What is the administrative relationship of the College to off-campus research substations? —————

---

---

---

Exhibit C (*Continued*)

19. Does the College administration have equal responsibility for teaching, research and extension. Yes-----No----- . If "no" should it have? Yes-----No----- . If "no" what mechanisms exist for integration of the three functions at College and University levels?

---



---



---

Are these mechanisms functioning adequately? Yes-----  
No----- . If "no" what improvements are needed? -----

---



---



---

20. Have authority and responsibility been properly delegated by the University level officers? Yes-----No----- . If "no" what improvements are needed? -----

---



---



---

21. Does the College have sufficient flexibility in organization and functioning with protection against centralized control or domination? Yes-----No----- . If "no" specify deficiencies, with examples: -----

---



---



---





24. How many times per year are there meetings of all Department Heads?

\_\_\_\_\_

What are the purposes of these meetings? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

25. Is a College circular prepared to inform staff members of College plans, activities, and accomplishments? Yes\_\_\_\_\_No\_\_\_\_\_. If “yes” how often?\_\_\_\_\_. Attach copy of circular to this questionnaire.

26. Give a brief statement of your philosophy with respect to human resource management to attain College goals:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

27. What programmes does the College have for each of the following?

A. Improvement of University Library collection and services:

\_\_\_\_\_

\_\_\_\_\_

Exhibit C (*Continued*)

B. Encouraging student use of the University Library: \_\_\_\_\_

---

---

C. Improvement of classrooms and teaching laboratories: \_\_\_\_\_

---

---

D. Improvement of teaching and grading: \_\_\_\_\_

---

---

E. Training schemes for teachers: \_\_\_\_\_

---

---

F. Improvement of teaching aids: \_\_\_\_\_

---

---

G. Discouraging unfair means at examinations: \_\_\_\_\_

---

---

H. Improving the practical field training programme: \_\_\_\_\_

---

---



I. Review and improvement of curricula: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

J. Reducing duplication and unnecessary courses: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

K. Keeping course content up-to-date: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

L. Receiving student complaints and grievances: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

M. Improving student disciplinary measures: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

N. Strengthening the staff-student advisory system: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

O. Recognition of excellence of staff and students: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Exhibit C (*Continued*)

28. What relationships (formal and informal) does the College have with other organizations (briefly describe relationships)? *Show College relationships only, not those primarily departmental.*

A. Other agricultural universities: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

B. Other colleges and universities: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

C. Input supply firms and organizations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

D. Marketing firms and organizations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

E. State Government departments (agriculture, animal husbandry, community development, cooperative, etc.): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

F. Central Government research institutions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

G. Indian Council of Agricultural Research: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

H. Central Government Ministries: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I. Leading farmers in the State: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

J. Ford, Rockefeller and other foundations: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

K. Foreign Government technical assistance agencies: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

L. Others that are considered important (specify): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Exhibit C (*Continued*)

29. How have relationships with other organizations and groups been strengthened in the past two years?-----  
-----  
-----
30. What are the most critical factors limiting growth of the College?
- (a) -----
- (b) -----
- (c) -----
- (d) -----
- (e) -----
31. What specific measure will be taken within the coming year to alleviate the impediments to growth indicated above?
- (a) -----
- (b) -----
- (c) -----
- (d) -----
- (e) -----
32. How does the productivity and stature of the College compare with similar colleges in other universities in the country (be as specific as possible)?  
-----  
-----  
-----

RESEARCH QUESTIONNAIRE

*(To be completed by the Director of Research)*

1. Is the Director of Research a full-time employee of the University?  
Yes-----No-----.
2. Are the powers and responsibilities of the Director specified by the University Act and Statutes? Yes-----No----- . Are they adequate? Yes-----No----- . How may they be improved upon? -----  
-----  
-----
3. To whom is the Director of Research responsible? -----
4. Are the administrative organization and relationships to officers and administrators specified and clearly understood? By the Vice-Chancellor? Yes-----No----- . By the Deans of Colleges? Yes-----No----- . By Department Heads? Yes-----No----- .
- Comments: -----  
-----  
-----  
-----
5. Is there a Research Advisory Committee at this University?  
Yes-----No----- . If "yes", how is this Committee constituted?  
-----  
-----

Exhibit D (*Continued*)

6. List the other University Committees on which the Research Director serves:

(a) \_\_\_\_\_ (d) \_\_\_\_\_

(b) \_\_\_\_\_ (e) \_\_\_\_\_

(c) \_\_\_\_\_ (f) \_\_\_\_\_

7. Does the Research Director serve on boards or committees or hold office in any off-campus organizations? Yes———No———.

If "yes", specify \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

8. What are the major responsibilities of the Director of Research?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. How many professional staff members are now employed by the Research Directorate? \_\_\_\_\_

(a) How many of these are posted at the University campus? \_\_\_\_\_

(b) How many are posted at each of the off-campus research stations or substations? \_\_\_\_\_



Exhibit D (*Continued*)

10. Are the members of the professional research staff budgeted with their respective academic departments? Yes—————No—————.

If "no", specify where budgeted: —————

—————

—————

11. How many motor vehicles are at the disposal of the Director of Research?

Bus————— Auto————— Jeep————— Motorbike—————

Others—————

12. Is transportation adequate? Yes—————. No—————. If "no", indicate deficiencies and steps being taken to correct them:

—————

—————

13. What estimated percentage of the research workers at this University devote some time to teaching?—————%.

14. What estimated percentage of the research workers at this University devote some time to extension?—————%

15. Does this University have effective integration of research with teaching and extension? Yes—————No—————.

Comments: —————

—————

—————

Exhibit D (*Continued*)

16. What means are used to encourage the integration of teaching, research and extension?

(a) At the level of the individual staff member? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(b) At the Department level? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(c) At the College level? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

17. For what purposes other than research are the regional research stations and substations used? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Do such uses interfere with the research programme? Yes \_\_\_\_\_

No \_\_\_\_\_. Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Exhibit D (*Continued*)

18. What organizations and procedures exist for coordination of post-graduate research with other research? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Are the means effective? Yes\_\_\_\_\_No\_\_\_\_\_. Comments:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

19. How are research programmes coordinated at the University level?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

20. How is the programme of the Research Directorate coordinated with the programme of the Department of Agriculture and the Development Department? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

How can this coordination be improved upon or strengthened?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Exhibit D (*Continued*)

21. How is the University research programme coordinated with the research programme of I.C.A.R.? \_\_\_\_\_

---

---

---

---

22. In what ways does the extension programme contribute to the effectiveness of the research programme? \_\_\_\_\_

---

---

23. What procedure exists to determine whether:

- (a) A proposed research project is relevant to the needs of farmers?

---

---

- (b) Research results are adaptable to farm conditions? \_\_\_\_\_

---

---

- (c) Research project originating outside the University may be using too much of the University's talent and facilities? \_\_\_\_\_

---

---

Exhibit D (*Continued*)

- (d) The research collaboration, both inter-departmental and inter-institutional, is being fostered or strengthened? \_\_\_\_\_

---

---

24. How can the research programmes in Animal Sciences, Home Science and Engineering be developed in order that they may play as significant a role in meeting the needs of the rural community as is presently done by the research in agriculture? \_\_\_\_\_

---

---

---

25. List the most significant research projects now under way which deal with the future or coming needs of the State:

---

---

---

---

---

26. What part does the Director of Research play in the development of a strong basic research programme? \_\_\_\_\_

---

---

---

Exhibit D (*Continued*)

27. What research facilities are projected to be developed during the next three years? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
28. List areas in which research gaps exist? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
29. List the outstanding contribution of basic research to the solution of farm problems? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
30. What procedure is used to involve the research talent of the basic science faculty in solving difficult rural problems? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
31. How can the time gap between the new finding and its field application be reduced or minimized? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Exhibit D (*Continued*)

32. Are the facilities at the regional research stations adequate in respect to?

(a) Staff housing and services? Yes———No———.

(b) Laboratory facilities and services? Yes———No———.

(c) Staff welfare and amenities? Yes———No———.

What steps are being taken for the improvements of (a) to (c) above?

---



---



---



---

33. In your opinion, how does the research programme of this University compare with that of the other agricultural universities? ———

---



---



---



---



---

34. The 1969-70 budget for the Research Directorate is:

Non-recurring \_\_\_\_\_

Recurring—salaries \_\_\_\_\_

Recurring—contingencies expense \_\_\_\_\_

Total : Rs. \_\_\_\_\_

Exhibit D (*Continued*)

35. What is the role of the Research Directorate in obtaining research funds from various sources? \_\_\_\_\_

---

---

---

---

---

36. Attach any additional information needed to describe the programmes and accomplishments of the Research Directorate:

---

---

---

---

---

(Attach sheets, if necessary)

## EXTENSION EDUCATION QUESTIONNAIRE

*(to be completed by the Director of Extension Education)*

1. Is the Director of Extension Education a full-time employee of the University? Yes———No———.
  2. Are the powers and responsibilities of the Director specified by University Act and Statutes? Yes———No———. Are they adequate? Yes———No———. How may they be improved upon? \_\_\_\_\_  
\_\_\_\_\_
  3. To whom is the Director of Extension Education responsible ? ——  
\_\_\_\_\_
  4. Are administrative organization and relationships to officers and administrators specified and clearly understood? By the Vice-Chancellor? Yes———No———. By the Deans of Colleges? Yes———No———. By Department Heads? Yes———No———.
- Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. Is there an extension Advisory Committee at this University? Yes———No———. If "yes", how is this Committee constituted?  
\_\_\_\_\_  
\_\_\_\_\_



Exhibit E (*Continued*)

6. List the other University Committees on which the Extension Director serves:
- (a) \_\_\_\_\_ (d) \_\_\_\_\_
- (b) \_\_\_\_\_ (e) \_\_\_\_\_
- (c) \_\_\_\_\_ (f) \_\_\_\_\_
7. Does the Extension Director serve on the board or on committees or hold office in any off-campus organizations? Yes \_\_\_\_\_ No \_\_\_\_\_  
If "yes", specify \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. How many professional staff members are now employed by the Directorate? \_\_\_\_\_
- (a) How many of these are head quartered at the University? \_\_\_\_\_
- (b) How many are posted at District headquarters? \_\_\_\_\_
- (c) How many are posted at block headquarters? \_\_\_\_\_
- (d) How many are posted at locations other than above? \_\_\_\_\_
9. How many motor vehicles are at the disposal of the Extension Directorate.
- Bus \_\_\_\_\_ ; Auto \_\_\_\_\_ ; Jeep \_\_\_\_\_ ; Motorbike \_\_\_\_\_ ;  
Others \_\_\_\_\_.
10. Is transportation adequate? Yes \_\_\_\_\_ No \_\_\_\_\_. If "no" indicate deficiencies and steps being taken to correct them: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Exhibit E (*Continued*)

11. What estimated percentage of the research workers at this University devote time to extension programmes? \_\_\_\_\_%.
12. What estimated percentage of the teaching staff devote time to extension programme? \_\_\_\_\_%.
13. Does this University have effective integration of extension education with teaching and research? Yes\_\_\_\_\_No\_\_\_\_\_. Comments:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
14. What means are used to encourage integration of teaching, research and extension? \_\_\_\_\_
  - (a) At the level of the individual staff member? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  - (b) At the Department level? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  - (c) At the college level? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
15. How are the resources of the regional substations used in Extension Education? \_\_\_\_\_  
 \_\_\_\_\_

Exhibit E (*Continued*)

16. What is the relationship of the Directorate of Extension to Extension Education Departments within colleges? -----  
-----  
-----
17. How are the extension programmes and activities coordinated at the University level? -----  
-----  
-----
18. How are extension programmes and activities coordinated among the main campuses and other campuses of the University? -----  
-----  
-----
19. How is the programme of the Extension Directorate coordinated with the programme of the Department of Agriculture? -----  
-----  
-----
20. Is there a written memorandum of understanding with the Department of Agriculture specifying the responsibilities of both parties in the broad area of agricultural development, Yes-----No-----, If "no" should there be? Yes-----No-----.  
Why or why not? -----  
-----  
-----



Exhibit E (*Continued*)

21. How is the programme of the Extension Directorate coordinated with the programme of other State Government departments? \_\_\_\_\_

---



---



---



---

22. What are the strong points in favour of the extension education programme as organized and operated in this State? \_\_\_\_\_

---



---



---

What are the weaknesses? \_\_\_\_\_

---



---

23. How do you measure the success of your Extension Education Programme? \_\_\_\_\_

---

24. What district of the State is most intensively covered by the extension programme? \_\_\_\_\_ What district is least intensively covered? \_\_\_\_\_ What is the explanation for this difference? \_\_\_\_\_

---



---

Exhibit E (*Continued*)

25. Is there an IADP District in the State ? Yes-----No-----.  
If "yes", what is the relationship of the Extension Directorate to the  
IADP programme? -----  
-----  
-----
26. What subjects (broad classification) are covered in the field extension  
programme? -----  
-----  
-----
27. What additional subjects do you plan to cover in the future? (List  
them in the order in which they will be taken up.)-----  
-----  
-----
28. What type of extension presentation or function is most popular with  
the small farmer? -----  
-----  
-----
29. What type of extension presentation or function is most likely to result  
in changes in a farm practice or adoption of an innovation? -----  
-----  
-----

30. What part does the village farmer play in planning the extension programme? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
31. What are some of the important limiting factors, not under your power to control, which determine the effectiveness of the extension programme? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
32. Briefly describe the role played by the professional representative of the Extension Directorate at the District level—\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- At the block level—\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Exhibit E (*Continued*)

33. What extension education programmes do you have for each of the following areas?

A. Home science: \_\_\_\_\_

---

---

---

---

B. Input suppliers and services: \_\_\_\_\_

---

---

---

---

C. Marketing organizations and industries: \_\_\_\_\_

---

---

---

---

D. Banks and other suppliers of agricultural credit: \_\_\_\_\_

---

---

---

---

Exhibit E (Continued)

34. Summarize the activities of the Extension Directorate under the following for the last year:

<i>Types of activity</i>	<i>Total number</i>	<i>Number attending or benefitted</i>
Training camps	_____	_____
Training centres	_____	_____
Demonstration centres	_____	_____
Field days	_____	_____
Fairs and Melas	_____	_____
Lectures and discussions	_____	_____
Short courses and training courses	_____	_____
Miscellaneous	_____	_____
<i>Publications</i>		
(a) Scientific	_____	_____
(b) Popular	_____	_____
(c) News bulletins	_____	_____
(d) Radio talks	_____	_____

35. Provide additional information needed to describe the programmes and accomplishments of the Extension Directorate: (Attach sheets if necessary)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**LIBRARY QUESTIONNAIRE**

*(To be filled in by the Librarian)*

1. Is there a full-time Librarian at this University? Yes-----  
No-----.

2. What are the powers and duties of the Librarian? -----  
-----  
-----  
-----

3. Is the Librarian considered a member of the University faculty?  
Yes-----No-----.

4. Is there a Library Committee at this University? Yes-----No-----.

5. How is the Library Committee constituted? -----  
-----  
-----  
-----

6. What are the responsibilities of the Library Committee? -----  
-----  
-----  
-----



Exhibit F (*Continued*)

7. Does the library regularly issue lists of the books, journals and documents received? Yes-----No----- . If "yes", how frequently? Weekly-----Monthly-----Semi-annually-----Annually----- . If "yes", list the groups to whom lists are issued:
- 
- 
- 
8. Who is responsible for issuing requisitions for the purchase of books, journals and other library materials? College Deans-----Department Head-----Individual staff members-----Librarian-----.
9. Is the Librarian authorized to renew scientific subscriptions without lapse? Yes-----No-----.
10. What special measures have been undertaken by the Librarian for promoting wider use of the library by:
- (a) Staff: -----
- 
- 
- 
- (b) Students:-----
- 
- 
-

Exhibit F (*Continued*)

11. Does this library have a textbook loan or rental programme? Yes——  
No———. If “yes”, explain how it is operated? —————  
—————  
—————  
—————  
—————
12. From the point of view of a Librarian, what are the key indicators for  
assessing the effectiveness of library services? —————  
—————  
—————  
—————  
—————
13. What guidelines have you followed in the development of this Library?  
—————  
—————  
—————  
—————
14. What programmes are now under way to expand the facilities and  
services of this library? —————  
—————  
—————  
—————

15. Library staff strength by years.

Staff position	Years					
	19—	19—	19—	19—	19—	19—
	(No.)	(No.)	(No.)	(No.)	(No.)	(No.)
Librarian	—	—	—	—	—	—
Deputy Librarian	—	—	—	—	—	—
Assistant Librarians	—	—	—	—	—	—
Senior Library assistants	—	—	—	—	—	—
Junior Library assistants	—	—	—	—	—	—
Bindery Foreman	—	—	—	—	—	—
Binders	—	—	—	—	—	—
Attendants	—	—	—	—	—	—
Stenographers	—	—	—	—	—	—
Clerk/Typists	—	—	—	—	—	—
Accountants	—	—	—	—	—	—
Messengers	—	—	—	—	—	—
Others (specify)	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	—	—	—	—	—	—
Total:	—	—	—	—	—	—



Exhibit F (Continued)

16. Library space, volumes, use, and expenditures by years.

Item	Years					
	19—	19—	19—	19—	19—	19—
Space:						
Total space (square metres)	—	—	—	—	—	—
Shelf space (volume)	—	—	—	—	—	—
Seats (at tables)	—	—	—	—	—	—
Seats (cubicles)	—	—	—	—	—	—
Volumes:						
Annual additions	—	—	—	—	—	—
Total number of:						
Books	—	—	—	—	—	—
Dissertations	—	—	—	—	—	—
Bound periodicals	—	—	—	—	—	—
Micro-documents	—	—	—	—	—	—
Total:	—	—	—	—	—	—
Current periodicals	—	—	—	—	—	—

Exhibit F (*Continued*)

Item	Year					
	19—	19—	19—	19—	19—	19—
Library use:	(No.)	(No.)	(No.)	(No.)	(No.)	(No.)
Volumes issued	—	—	—	—	—	—
Volumes consulted	—	—	—	—	—	—
Number of readers	—	—	—	—	—	—
Expenditure:	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)	(Rs.)
Recurring—Staff	—	—	—	—	—	—
Recurring—Journals	—	—	—	—	—	—
Books	—	—	—	—	—	—
Equipment expenses	—	—	—	—	—	—
Miscellaneous expenses	—	—	—	—	—	—
Total annual expenditure	—	—	—	—	—	—

17. Indicate the provisions for making library books, journals, periodicals, etc. available to staff at off-campus regional research stations—

18. If University has more than one campus, describe the organizational administrative, and functional relations between campuses? —

Exhibit F (*Continued*)

19. List the Councils, Boards and Committees on which the Librarian serves:

(a) \_\_\_\_\_ (d) \_\_\_\_\_

(b) \_\_\_\_\_ (e) \_\_\_\_\_

(c) \_\_\_\_\_ (f) \_\_\_\_\_

20. Are University administrative and financial procedures such that additions to the library collection can be made without undue delay?

Yes \_\_\_\_\_ No \_\_\_\_\_. If the answer is "no" indicate needs for improvement. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

21. Does this University library have arrangements for the inter-library loan of library materials with the libraries of other universities and National Research Institutes? Yes \_\_\_\_\_ No \_\_\_\_\_. Explain \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

22. What are the plans for improvement of library resources and services during the next 3 years? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



FACULTY MEMBER QUESTIONNAIRE

*The Information in this questionnaire will be considered to be highly confidential and will not be used in such a way that the specific source is identifiable.*

Rank\_\_\_\_\_ Highest degree\_\_\_\_\_

Department\_\_\_\_\_Year joined Univ. Faculty\_\_\_\_\_Age\_\_\_\_\_

1. Have you studied abroad? Yes-----No-----. If "yes",  
Where?----- When? -----.

2. (a) Membership in professional societies, Indian:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(b) Membership in professional societies, other:

\_\_\_\_\_  
\_\_\_\_\_

3. Off-campus professional and educational meetings attended during  
the last two years:

(a) Within State: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

(b) Outside State (in India): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(c) Outside India: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Give a brief description of your *most* important research findings of the past two years:

(a) \_\_\_\_\_

\_\_\_\_\_

(b) \_\_\_\_\_

\_\_\_\_\_

(c) \_\_\_\_\_

\_\_\_\_\_

(d) \_\_\_\_\_

\_\_\_\_\_

(e) \_\_\_\_\_

\_\_\_\_\_

Exhibit G (*Continued*)

5. List below the specific contributions *your department* has made that have resulted in increased agricultural production in the State:

(a) \_\_\_\_\_

\_\_\_\_\_

(b) \_\_\_\_\_

\_\_\_\_\_

(c) \_\_\_\_\_

\_\_\_\_\_

(d) \_\_\_\_\_

\_\_\_\_\_

(e) \_\_\_\_\_

\_\_\_\_\_

6. List below the most important *general* contributions of this University in *economic* and *social* development of the State.

(a) \_\_\_\_\_

\_\_\_\_\_

(b) \_\_\_\_\_

\_\_\_\_\_

(c) \_\_\_\_\_

\_\_\_\_\_

(d) \_\_\_\_\_

\_\_\_\_\_

(e) \_\_\_\_\_

\_\_\_\_\_

(If more space is needed, attach another sheet).



Exhibit G (*Continued*)

7. List below the major limitations on your effectiveness as a staff member of this University (if no major limitations, so state):

- (a) \_\_\_\_\_  
 \_\_\_\_\_
- (b) \_\_\_\_\_  
 \_\_\_\_\_
- (c) \_\_\_\_\_  
 \_\_\_\_\_
- (d) \_\_\_\_\_  
 \_\_\_\_\_
- (e) \_\_\_\_\_  
 \_\_\_\_\_

*Circle* a response for each statement according to the following scale:

- A : Strongly agree;  
 B : Agree somewhat;  
 C : Undecided;  
 D : Disagree somewhat;  
 E : Strongly disagree.

Consider the statement and decide whether you agree with it more than you disagree with it, or disagree more than you agree. Then decide whether you agree or disagree 'strongly' or 'somewhat'. If you have studied the statement carefully and can neither agree nor disagree, you may mark it (C) 'undecided'. If your knowledge or experience give no basis for judgement on a statement you may leave it blank.

If you have comments to make regarding any of the statements or explanation of your answer, please include in the space provided following the last statement. Identify statement number with comment.

**Example :***Agree**Disagree*

☒ A    B    C    D    E

This University is making an important contribution through education of young men and women.

(Circling the "A" for the example statement shows "strong agreement" with the statement—now begin with statement 1).

A    B    C    D    E

1. The educational background of the undergraduate students admitted to this University is better than it was five years ago.

A    B    C    D    E

2. Lack of employment opportunity for graduates retards the rate of growth of this University.

A    B    C    D    E

3. This University should put more effort into seeking out employment opportunities for graduates.

A    B    C    D    E

4. In comparison with the annual centralized examinations internal examinations encourage better understanding of subject matter in a course.

A    B    C    D    E

5. Internal examinations reduce the percentage of student failures (in comparison with annual centralized examinations).

A    B    C    D    E

6. Internal examinations reduce more of the teacher's time for class preparation (than with annual centralized examinations).

A    B    C    D    E

7. The trimester system stimulates constant study throughout the term and discourages student cramming and frustration just before the terminal examination.

Exhibit G (*Continued*)

- |   |   |   |   |   |  |
|---|---|---|---|---|--|
| A | B | C | D | E | 8. The internal evaluation system encourages teachers to keep course content abreast of current scientific developments.               |
|   |   |   |   |   |  |
| A | B | C | D | E | 9. The grading system at this University provides a fair appraisal of students' knowledge of the subject matter studied.               |
|   |   |   |   |   |  |
| A | B | C | D | E | 10. Complaints about the inadequacy of grading are largely from ineffective teachers.  |
|   |   |   |   |   |  |
| A | B | C | D | E | 11. Curricula at this University are not rigid and are revised frequently.   |
|   |   |   |   |   |  |
| A | B | C | D | E | 12. Student use of unfair means in tests and examinations is a problem at this University.   |
|   |   |   |   |   |  |
| A | B | C | D | E | 13. Practical training should be a part of the requirements for undergraduate students in an agricultural university.                  |
|   |   |   |   |   |  |
| A | B | C | D | E | 14. The practical training requirements of this University are reasonable and successfully organized and implemented.                  |
|   |   |   |   |   |  |
| A | B | C | D | E | 15. At this University the student advisory system takes an undue amount of time from classroom teaching, research and extension work. |
|   |   |   |   |   |  |
| A | B | C | D | E | 16. In general, classrooms and teaching laboratories are adequate for instruction of both undergraduate and postgraduate students.     |
|   |   |   |   |   |  |
| A | B | C | D | E | 17. There is need for a major improvement of the audio-visual aid facilities and services of this University.                          |
|   |   |   |   |   |  |
| A | B | C | D | E | 18. The sports and athletic programme adds significantly to recreational needs and contributes to the spirit of the student body.      |



Exhibit G (*Continued*)

- |   |   |   |   |   |  |
|---|---|---|---|---|--|
| A | B | C | D | E | 19. The sports and athletic programme provides undue competition for the time of students needed for their academic work.  |
| A | B | C | D | E | 20. The hostels of this University provide a satisfactory environment for student study.   |
| A | B | C | D | E | 21. The library resources of this University are adequate for my teaching, research and extension education programme.   |
| A | B | C | D | E | 22. There is a satisfactory system for ordering and obtaining additions to the library for my field of teaching, research and extension education.                                       |
| A | B | C | D | E | 23. My research programme is adequately supported in terms of the laboratory, experiment field and other needed facilities and space.  |
| A | B | C | D | E | 24. The procurement procedures and practices of this University ensure that supplies and equipment are obtained within a reasonable period of time.                                      |
| A | B | C | D | E | 25. The methods of allocating research resources to departments and individuals are satisfactory.  |
| A | B | C | D | E | 26. This University has adequate facilities and staff for printing information for off-campus extension education work.  |
| A | B | C | D | E | 27. This University has successfully integrated and coordinated the teaching, research and extension functions.  |
| A | B | C | D | E | 28. This University has worked out satisfactory arrangements with the State Government for cooperation in extension education and providing farmers with the needed inputs and services. |

Exhibit G (*Continued*)

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| A | B | C | D | E | 29. The relationships of this University with the Indian Council of Agricultural Research are satisfactory for furthering the research that is needed.  |
| A | B | C | D | E | 30. Staff members at my level have an adequate voice in the academic affairs of this University.  |
| A | B | C | D | E | 31. Department committees, meetings and other means provide for adequate communication within my Department.  |
| A | B | C | D | E | 32. College committees, meetings and other means provide for adequate communication with my college.  |
| A | B | C | D | E | 33. In my Department, non-administrative staff members participate in the development of the annual Departmental budget.  |
| A | B | C | D | E | 34. In my Department, there is adequate participation of non-administrative staff members in the selection of new Department staff members.   |
| A | B | C | D | E | 35. In general, the Department, College and University-level administration is satisfactory to encourage growth of this University.   |
| A | B | C | D | E | 36. Salary levels and other benefits provided by this University are fully comparable to those which educators with like training and experience could expect to obtain in other employment in India. |
| A | B | C | D | E | 37. The opportunity for advancement with this University is an incentive for me to do excellent work.   |
| A | B | C | D | E | 38. The housing, living conditions and general environment of this University are conducive to scholarly endeavours.  |

## Exhibit G (Continued)

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| A | B | C | D | E | 39. Primary schools for children of staff members are adequate at or near the University Campus.  |
| A | B | C | D | E | 40. Appointments at this University are made on the basis of merit.   |
| A | B | C | D | E | 41. The University has an adequate scheme for rewarding outstanding work with special awards and recognitions.                                |
| A | B | C | D | E | 42. There is a satisfactory mechanism for selecting those who are to receive special awards and recognitions as rewards for outstanding work. |
| A | B | C | D | E | 43. This University gives higher priority to research and postgraduate instruction than to teaching undergraduate students.                   |

Comments and explanation (Give question number followed by comments)

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

(If more space is needed, attach additional sheets)



## STUDENT QUESTIONNAIRE

- A. Check One: Undergraduate \_\_\_\_\_ Postgraduate \_\_\_\_\_.
- B. If an undergraduate student, indicate College \_\_\_\_\_  
 Year 1st \_\_\_\_\_ 2nd \_\_\_\_\_ 3rd \_\_\_\_\_ 4th \_\_\_\_\_ 5th \_\_\_\_\_.
- C. If a postgraduate student, indicate Department \_\_\_\_\_  
 M.Sc. or Ph.D. \_\_\_\_\_ Year B.Sc. completed \_\_\_\_\_.
- D. If foreign student, indicate country \_\_\_\_\_.
- E. For this University give your rating of each of the items listed. Rate according to the following scale by placing a number in the blank.

Outstanding	= 5
Excellent	= 4
Good	= 3
Fair	= 2
Poor	= 1

If your rating is *Fair* (2) or *Poor* (1) give deficiencies and suggestions for improvements. (add sheets if necessary for more space)

<i>Item</i>	<i>Number Rating</i>
1. Library books and reference materials	_____
Deficiencies and suggestions _____ _____	
2. Library seating capacity	_____
Deficiencies and suggestions _____ _____	

Exhibit H (Continued)

<i>Item</i>	<i>Number rating</i>
3. Assistance given by library staff	_____
Deficiencies and suggestions_____	
_____	
4. Hostel comfort	_____
Deficiencies and suggestions_____	
_____	
5. Hostel as a place to study	_____
Deficiencies and suggestions_____	
_____	
6. Hostel rules and regulations	_____
Deficiencies and suggestions_____	
_____	
7. Hostel charges	_____
Deficiencies and suggestions_____	
_____	
8. Food quantity and quality	_____
Deficiencies and suggestions_____	
_____	
9. Examination system as measure of student knowledge	_____
Deficiencies and suggestions_____	
_____	

Exhibit H (*Continued*)

<i>Item</i>	<i>Number rating</i>
10. Fairness of the grading system	_____
Deficiencies and suggestions_____	
_____	
11. The minimum Grade Point Average requirement	_____
Deficiencies and suggestions_____	
_____	
12. Teacher willingness to answer student questions in class	_____
Deficiencies and suggestions_____	
13. Faculty advising programme for students	_____
Deficiencies and suggestions_____	
_____	
14. Adequacy of scholarships and other financial assistance	_____
Deficiencies and suggestions_____	
_____	
15. Adequacy of classroom sizes	_____
Deficiencies and suggestions_____	
_____	
16. Classroom desk comfort and writing space	_____
Deficiencies and suggestions_____	
_____	



Exhibit H (*Continued*)

<i>Item</i>	<i>Number rating</i>
17. Lighting in classrooms and laboratories	_____
Deficiencies and suggestions_____	
_____	
18. Adequacy of chalkboards	_____
Deficiencies and suggestions_____	
_____	
19. Adequacy of audio-visual aids	_____
Deficiencies and suggestions_____	
_____	
20. Adequacy of laboratory equipment	_____
Deficiencies and suggestions_____	
_____	
21. Medical facilities and services	_____
Deficiencies and suggestions_____	
_____	
22. The organized athletic programme	_____
Deficiencies and suggestions_____	
_____	
23. Facilities and services for entertainment and recreation	_____
Deficiencies and suggestions_____	
_____	

Exhibit H (*Continued*)*Number rating**Item*

24. Co-curricular activities \_\_\_\_\_  
 Deficiencies and suggestions \_\_\_\_\_  
 \_\_\_\_\_
25. The shopping centre, banking and postal services \_\_\_\_\_  
 Deficiencies and suggestions \_\_\_\_\_  
 \_\_\_\_\_
26. The practical field training programme \_\_\_\_\_  
 Deficiencies and suggestions \_\_\_\_\_  
 \_\_\_\_\_
27. The NCC-training programme \_\_\_\_\_  
 Deficiencies and suggestions \_\_\_\_\_  
 \_\_\_\_\_
28. The conduct probation system \_\_\_\_\_  
 Deficiencies and suggestions \_\_\_\_\_  
 \_\_\_\_\_
29. The general campus environment \_\_\_\_\_  
 Deficiencies and suggestions \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
30. How many conferences have you had with your faculty adviser during the last two trimester (if none, so state)? \_\_\_\_\_  
 Total time spent in conferences with your faculty adviser during that period (hours) \_\_\_\_\_ (minutes) \_\_\_\_\_.

Exhibit H (Continued)

31. Show how you use your time during *a typical week* of the current trimester :

*Hours*

In classes, laboratories, practicals	_____
Practical field training	_____
Study in hostels	_____
Study in library	_____
Study, other (specify places)_____	_____
Organized sports and athletics	_____
Co-curricular activities	_____
Recreation	_____
Total of above hours	_____

32. My study outside of the classroom is divided as follows :

*Percent*

Study of lecture notes taken in class	_____
Study of textbooks	_____
Study of books in library	_____
Study of cyclostyled materials given to students in class	_____
Preparation of written reports*	_____
Preparation for oral reports to class	_____
Other study (specify)_____	_____
Total of above should equal	<b>100%</b>

\*Postgraduate students please include Thesis.

33. What do you expect to do upon completion of the degree you are now pursuing at this University ? (be as specific as you can)\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





204

Printing courtesy of United States Agency for  
International Development Mission to India, New Delhi.  
Printed at Cambridge Printing Works, Delhi (India)





